

STATE WATER CONTROL BOARD
9 VAC 25-40 ~~POLICY FOR NUTRIENT ENRICHED~~
WATERS AND DISCHARGERS WITHIN THE
CHESAPEAKE BAY WATERSHED AND 9 VAC 25-720

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9 VAC 25-40-10. Purpose.

This ~~policy~~ *regulation* provides for the control of discharges of nutrients from point sources affecting state waters that ~~have been~~ are designated "nutrient enriched waters" in 9 VAC 25-260-350 *or are located within the Chesapeake Bay Watershed, which consists of the following Virginia river basins: Potomac River Basin (9 VAC 25-260-390 and 9 VAC 25-260-400), James River Basin (9 VAC 25-260-410, 9 VAC 25-260-415, 9 VAC 25-260-420, and 9 VAC 25-260-430), Rappahannock River Basin (9 VAC 25-260-440), Chesapeake Bay and small coastal basins (9 VAC 25-260-520, Sections 2 through 3g), and the York River Basin (9 VAC 25-260-530).*

The provisions of this chapter and the Water Quality Management Planning Regulation (9 VAC 25-720) constitute the nutrient reduction requirements for point source discharges in the Chesapeake Bay Watershed to protect the Chesapeake Bay and its tidal rivers.

9 VAC 25-40-20. Authority. (Repealed.)

~~The board has adopted this policy under the authority of §§ 62.1-44.15(3), 62.1-44.15(10) and 62.1-44.15(14) of the Code of Virginia.~~

9 VAC 25-40-25. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.

"Expansion" or "expands" means initiating construction of a facility after July 1, 2005 to increase treatment capacity, except that the term does not apply in those cases where a Certificate to Construct was issued on or before July 1, 2005.

"Point source dischargers" or "dischargers" do not include permitted discharges of non-contact cooling water or storm water.]

9 VAC 25-40-30. Strategy for "nutrient enriched waters." *outside of Chesapeake Bay Watershed.*

~~As specified here, the board shall reopen the NPDES permits of certain point source dischargers to "nutrient enriched waters" and shall impose effluent limitations on nutrients in the discharges authorized by those permits and certain new permits.~~

A. All dischargers authorized by ~~NPDES~~ *VPDES* permits issued on or before July 1, 1988, to discharge ~~4~~ 1.0 MGD or more to "nutrient enriched waters" shall ~~be required to~~ meet a monthly average total phosphorus effluent limitation of 2[-0] mg/l ~~as quickly as possible and in any event within three years following modification of the NPDES permit.~~

~~At the time of modification of the NPDES permit, any discharger who voluntarily accepts a permit to require installation and operation of nitrogen removal facilities to meet a monthly average total nitrogen effluent limitation of 10 mg/l for the months of April through October shall be allowed an additional year to meet the phosphorus effluent limitation in 9 VAC 25-40-30 A.~~

B. All New source dischargers as defined in ~~9 VAC 25-30-10~~ [9 VAC 25-31] with a permit issued ~~[that commence discharging with a permit issued]~~ after July 1, 1988, and a design flow greater than or equal to 0.05 are authorized by *VPDES* permits to discharge 0.050 MGD ~~who propose to discharge or more~~ to "nutrient enriched waters" shall be required to meet a monthly average total phosphorus effluent limitation of 2[-0] mg/l.

C. This ~~policy regulation~~ shall not be construed to relax any effluent limitation concerning a nutrient that is imposed under any other requirement of state or federal law. ~~No time extensions outlined in 9 VAC 25-40-30 A for installation and operation of nitrogen removal facilities shall be granted to a discharger if such an effluent limitation or a time extension is already imposed under any other requirement of state or federal law or regulation.~~

D. Any discharger to "nutrient enriched waters" that is located within the Chesapeake Bay Watershed is not subject to the requirements of this section.

9 VAC 25-40-40. Permit amendments.

Whenever the board determines that a permittee has the potential for discharging monthly average total phosphorus concentrations greater than or equal to 2[-0] mg/l or monthly average total nitrogen concentrations greater than or equal to 40 ~~[4.0 x 10⁻⁴ 10]~~ mg/l to "nutrient enriched waters," the board may reopen the ~~NPDES~~ *VPDES* permit to impose monitoring requirements for nutrients in the discharge.

9 VAC 25-40-50. Possibility of further limitations.

The board anticipates that, following implementation of the foregoing requirements and evaluation of effects of this ~~policy regulation~~ and of the results of the nonpoint source control programs, further limitations on discharges of phosphorus or of other nutrients may be necessary to control undesirable growths of aquatic plants.

9VAC25-40-60. Other state petitions.

The board may entertain petitions from adjoining states to consider rulemakings to control nutrients entering tributaries to "nutrient enriched waters" of the adjoining state.

9 VAC 25-40-70. Strategy for Chesapeake Bay Watershed.

A. ~~[In recognition that nutrient reductions from point source discharges have a significant role in the restoration of the Chesapeake Bay and its tidal rivers since they provide a more immediate benefit to water quality and are more reliable than reductions from non-point sources, it~~ ~~it]~~ shall be the policy of the board that point source dischargers within the Chesapeake Bay Watershed ~~[utilize biological nutrient removal technology or its equivalent whenever feasible, as provided by subsection B of this section. For the purposes of this chapter and the related sections of 9 VAC 25-720, the terms "point source dischargers" or "dischargers" do not include permitted discharges of noncontact cooling water or storm water operate installed nutrient removal technologies at the treatment efficiency levels for which they were designed].~~

B. As specified herein, the board shall ~~issue and reissue the VPDES permits of certain point source dischargers within the Chesapeake Bay Watershed and shall impose effluent concentration limitations on nutrients in the discharges authorized by these permits.~~include technology-based effluent concentration limitations in the individual permit for any facility that has installed technology for the control of nitrogen and phosphorus whether by new construction, expansion, or upgrade. Such limitations shall be based on the technology installed by the facility and shall be expressed as annual average concentrations.]

1. Except as provided under subdivision 4 of this subsection, ~~[all significant dischargers, as defined in 9 VAC 25-720, authorized by VPDES permits issued on or before the effective date of this chapter shall achieve an annual average total nitrogen effluent limitation of not more than 8.0 mg/l and an annual average total phosphorus effluent limitation of not more than 1.0 mg/l; provided, however, these dischargers must achieve an annual total nitrogen waste load allocation and an annual total phosphorus waste load allocation as required by the Water Quality Management Planning Regulation (9 VAC 25-720). The applicable limitations shall be achieved within four years following reissuance or major modification of the VPDES permit, but in no case later than December 31, 2010-an owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or more per day, or an equivalent load directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters shall install state-of-the-art nutrient removal technology at the time of the expansion and achieve an annual average total nitrogen effluent concentration of 3.0 milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter].~~

2. Except as provided under subdivision 4 of this subsection, ~~[all dischargers that do not meet the definition of a significant discharger and are authorized by VPDES permits issued on or before July 1, 2004, to discharge 0.040 MGD or more shall be~~

~~required to achieve an annual average total nitrogen effluent limitation of 8.0 mg/l and an annual average total phosphorus effluent limitation of 1.0 mg/l. These limitations shall be included in reissued or modified permits after December 31, 2010, and shall be achieved within four years following reissuance or major modification of the VPDES permits an owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or more per day up to and including 499,999 gallons per day, or an equivalent load directly into nontidal waters, shall install at a minimum, biological nutrient removal technology at the time of the expansion and achieve an annual average total nitrogen effluent concentration of 8.0 milligrams per liter and an annual average total phosphorus effluent concentration of 1.0 milligram per liter].~~

3. Except as provided under subdivision 4 of this subsection, ~~[all new dischargers or expanded discharges of nitrogen or phosphorus authorized by VPDES permits issued after the effective date of this chapter to discharge 0.040 MGD or more shall achieve an annual average total nitrogen effluent limitation of 3.0 mg/l and an annual average total phosphorus effluent limitation of 0.30 mg/l an owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued on or after July 1, 2005, to discharge 40,000 gallons or more per day, or an equivalent load shall install:~~

~~a. at a minimum, biological nutrient removal technology at any facility authorized to discharge up to and including 99,999 gallons per day, or an equivalent load, directly into tidal and nontidal waters, or up to and including 499,999 gallons per day, or an equivalent load, to nontidal waters and achieve an annual average total nitrogen effluent concentration of 8.0 milligrams per liter and an annual average total phosphorus effluent concentration of 1.0 milligram per liter; and~~

~~b. state-of-the-art nutrient removal technology at any facility authorized to discharge 100,000 gallons or more per day, or an equivalent load, directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters and achieve an annual average total nitrogen effluent concentration of 3.0 milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter.]~~

4. On a case-by-case basis, ~~[a discharger may demonstrate to the satisfaction of the board through treatability, engineering, or other studies that biological nutrient removal technology or its equivalent at a point source discharge cannot achieve the effluent limitations of subdivision 1, 2 or 3 of this subsection, as applicable. In these cases, the board shall require alternative effluent limitations the board deems appropriate for that discharger; the board may establish a technology-based standard and associated concentration limitation less stringent than the applicable standard specified in subdivision 1, 2 or 3 of this subsection, as applicable, based on a demonstration by an owner or operator that the specified standard is not technically or economically feasible for the affected facility or that the technology-based standard and associated concentration limitation~~

would require the owner or operator to construct treatment facilities not otherwise necessary to comply with his waste load allocation without reliance on nutrient credit exchanges pursuant to §62.1-44.19:18 of the Code of Virginia.] provided, however, the discharger must achieve an annual total nitrogen waste load allocation and an annual total phosphorus waste load allocation as required by the Water Quality Management Planning Regulation (9 VAC 25-720).

[5-C.] Any effluent limitation concerning a nutrient that is imposed under any other requirement of state or federal law or regulation that is more stringent than those established herein shall not be affected by this regulation.

[D. In accordance with § 10.1-1187.1 et seq. of the Code of Virginia, the board may approve an alternate compliance method to the technology-based effluent concentration limitations as required by 9 VAC 25-40-70.B. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise ("E3") facility or an Extraordinary Environmental Enterprise ("E4") facility to allow the suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully-implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed.]

[C-E]. Notwithstanding subsections A ~~and B~~ through D] of this section, point source dischargers within the Chesapeake Bay Watershed are also governed by the Water Quality Management Planning Regulation (9 VAC 25-720).

9 VAC 25-720-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Assimilative capacity" means the greatest amount of loading that a water can receive without violating water quality standards, significantly degrading waters of existing high quality, or interfering with the beneficial use of state waters.

"Best management practices (BMP)" means a schedule of activities, prohibition of practices, maintenance procedures and other management practices to prevent or reduce the pollution of state waters. BMPs include treatment requirements, operating and maintenance procedures, schedule of activities, prohibition of activities, and other management practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

"Best practicable control technology currently available (BPT)" means control measures required of point source discharges (other than POTWs) as determined by the EPA pursuant to § 304(b)(1) of the CWA (33 USC § 1251 et seq.) as of 1987.

"Board" means the State Water Control Board (SWCB).

"Chesapeake Bay Watershed" means the following Virginia river basins: Potomac River Basin (9 VAC 25-260-390 and 9 VAC 25-260-400), James River Basin (9 VAC 25-260-410, 9 VAC 25-260-415, 9 VAC 25-260-420, and 9 VAC 25-260-430),

Rappahannock River Basin (9 VAC 25-260-440), Chesapeake Bay and small coastal basins (9 VAC 25-260-520, Sections 2 through 3g), and the York River Basin (9 VAC 25-260-530).

"Clean Water Act or Act (CWA)" means 33 USC § 1251 et seq. as amended, as of 1987.

~~["Delivered waste load" means the discharged load from a point source in a river basin that is adjusted by a delivery factor for any alteration of that load occurring from biological, chemical, and physical processes during riverine transport to tidal waters. Delivery factors are calculated using the Chesapeake Bay Program watershed model.]~~ "Delivery factor" means an estimate of the number of pounds of total nitrogen or total phosphorus delivered to tidal waters for every pound discharged from a permitted facility, as determined by the specific geographic location of the permitted facility, to account for attenuation that occurs during riverine transport between the permitted facility and tidal waters. Delivery factors shall be calculated using the Chesapeake Bay Program watershed model].

"Discharge" means when used without qualification, a discharge of a pollutant or any addition of any pollutant or combination of pollutants to state waters or waters of the contiguous zone or ocean or other floating craft when being used for transportation.

"Effluent limitation" means any restriction imposed by the board on quantities, discharge rates or concentrations of pollutants that are discharged from ~~joint~~ point] sources into state waters.

"Effluent limitation guidelines" means a regulation published by EPA under the Act and adopted by the board.

"Effluent limited segment (EL)" means a stream segment where the water quality does and probably will continue to meet state water quality standards after the application of technology-based effluent limitations required by §§ 301(b) and 306 of the CWA (33 USC § 1251 et seq.) as of 1987.

"Environmental Protection Agency (EPA)" means the United States Environmental Protection Agency.

["Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.]

"Load or loading" means the introduction of an amount of matter or thermal energy into a receiving water. Loading may be either man-caused (pollutant loading) or natural (background loading).

"Load allocation (LA)" means the portion of a receiving water's loading capacity attributable either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished.

"Nonpoint source" means a source of pollution, such as a farm or forest land runoff, urban storm water runoff, mine runoff, or salt water intrusion that is not collected or discharged as a point source.

"Point source" means any discernible, defined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agricultural land.

"Pollutant" means any substance, radioactive material, or heat that causes or contributes to, or may cause or contribute to, pollution. It does not mean:

1. Sewage from vessels; or
2. Water, gas, or other material that is injected into a well to facilitate production of oil, dry gas, or water derived in association with oil or gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes if approved by the Department of Mines, Minerals and Energy unless the board determines that such injection or disposal will result in the degradation of ground or surface water resources.

"Pollution" means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters (i) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (ii) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (iii) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses; provided that: (a) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner, which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners is sufficient to cause pollution; (b) the discharge of untreated sewage by any owner into state waters; and (c) contributing to the contravention of standards of water quality duly established by the board, are "pollution" for the terms and purposes of this water quality management plan.

"Publicly owned treatment works (POTW)" means any sewage treatment works that is owned by a state or municipality. Sewers, pipes, or other conveyances are included in this definition only if they convey wastewater to a POTW providing treatment.

"Significant ~~[discharges~~ discharger]" means ~~[a point source discharger within the Chesapeake Bay Watershed that is listed in any of the following subsections: 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, or 9 VAC~~

~~25-720-120 C; or a new or expanded point source discharger authorized by a VPDES permit issued after July 1, 2004, to discharge 2,300 pounds per year or more of total nitrogen or 300 pounds per year or more of total phosphorus. (i) a point source discharger to the Chesapeake Bay watershed with a design capacity of 0.5 million gallons per day or greater, or an equivalent load, (ii) a point source discharger to the Chesapeake Bay watershed east of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load, (iii) a planned or newly expanding point source discharger to the Chesapeake Bay watershed, which is expected to be in operation by 2010 with a permitted design of 0.5 million gallons per day or greater, or an equivalent load, or (iv) a planned or newly expanding point source discharger to the Chesapeake Bay watershed east of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load, which is expected to be in operation by 2010.]~~

"State waters" means all waters, on the surface and under the ground and wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Surface water" means all waters in the Commonwealth except ground waters as defined in § 62.1-255 of the Code of Virginia.

"Total maximum daily load (TMDL)" means the sum of the individual waste load allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources, natural background loading and usually a safety factor. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.

"Toxic pollutant" means any agent or material including, but not limited to, those listed under § 307(a) of the CWA (33 USC § 1251 et seq. as of 1987), which after discharge will, on the basis of available information, cause toxicity.

"Toxicity" means the inherent potential or capacity of a material to cause adverse effects in a living organism, including acute or chronic effects to aquatic life, detrimental effects on human health or other adverse environmental effects.

"Trading" means the transfer of assigned waste load allocations [or credits] for total nitrogen or total phosphorus among point source dischargers. It does not include the transfer of total nitrogen for total phosphorus, or the reverse.

"Virginia Pollution Discharge Elimination System (VPDES) permit" means a document issued by the board, pursuant to ~~9-VAC 25-30~~ 9 VAC 25-31, authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters.

"Waste load allocation (WLA)" means the portion of a receiving water's loading or assimilative capacity allocated to one of its existing or future point sources of pollution. WLAs are a type of water quality-based effluent limitation.

"Water quality limited segment (WQL)" means any stream segment where the water quality does not or will not meet applicable water quality standards, even after the application of technology-based effluent limitations required by §§ 301(b) and 306 of the CWA (33 USC § 1251 et seq. as of 1987).

"Water quality management plan (WQMP)" means a state- or area-wide waste treatment management plan developed and updated in accordance with the provisions of §§ 205(j), 208 and 303 of the CWA (33 USC § 1251 et seq. as of 1987).

"Water quality standards (WQS)" means narrative statements that describe water quality requirements in general terms, and of numeric limits for specific physical, chemical, biological or radiological characteristics of water. These narrative statements and numeric limits describe water quality necessary to meet and maintain reasonable and beneficial uses such as swimming and, other water based recreation, public water supply and the propagation and growth of aquatic life. The adoption of water quality standards under the State Water Control Law is one of the board's methods of accomplishing the law's purpose.

9 VAC 25-720-30. ~~[Reserved.] Relationship to 9 VAC 25-40, Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed.~~

The provisions of this chapter and 9 VAC 25-40, Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed, constitute the nutrient reduction requirements for point source discharges in the Chesapeake Bay Watershed to protect the Chesapeake Bay and its tidal rivers.

9 VAC 25-720-40. ~~[Reserved.] [Trading and offsets in the Chesapeake Bay Watershed. Implementing Nitrogen and Phosphorus Waste Load Allocations in the Chesapeake Bay Watershed].~~

A. Nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, and 9 VAC 25-720-120 C may be traded ~~[among significant dischargers within the same river basin to assist in the achievement and maintenance of the total basin delivered waste load allocations in accordance with the Chesapeake Bay Watershed Nutrient Credit Exchange Program established under article 4.02 of Chapter 3.1 of Title 62.1 of the Code of Virginia. Trades must account for the delivery factor applicable to each discharge based upon its location within the river basin and calculated by the Chesapeake Bay Program watershed model.]~~

B. ~~[Any proposed trade shall not result in degradation or adverse impacts to local water quality or violations of water quality standards.]~~ The nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110, and 9 VAC 25-720-120 C are considered to be bioavailable to aquatic life. On a case-by-case basis, a discharger may demonstrate to the satisfaction of the board that a significant portion of the nutrients discharged by the facility is not bioavailable to aquatic life. In these cases, the board may limit the permitted discharge to reflect only that portion of the assigned waste load allocation that is bioavailable.]

~~C. [Any trade of nitrogen or phosphorus waste load allocation among individual significant dischargers shall not result in the exceedence of the total basin delivered waste load allocation within which the significant dischargers are located. Unless otherwise noted, the nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, and 9 VAC 25-720-120 C are considered total loads including nutrients present in the intake water from the river, as applicable. On a case-by-case basis, an industrial discharger may demonstrate to the satisfaction of the board that a significant portion of the nutrient load originates in its intake water. In these cases, the board may limit the permitted discharge to reflect only the net nutrient load portion of the assigned waste load allocation.]~~

~~D. The board may authorize trading only through VPDES permits. Trades conducted in accordance with this chapter through VPDES permits shall not require any amendments to this chapter.~~

~~E. Any discharge of nitrogen or phosphorus load from a new significant discharger or any increase in the discharge of nitrogen or phosphorus load from an expansion of an existing significant discharger that would exceed the waste load allocation for that significant discharger shall be accompanied by one of the following actions within the same river basin: (i) a trade for an equivalent or greater load reduction of the same pollutant from one or more existing dischargers; (ii) in accordance with the criteria listed below, the installation, monitoring and maintenance of best management practices that achieve an offsetting reduction of nonpoint source delivered load of nitrogen or phosphorus that the board determines is at least twice the reduction in delivered load compared to the new or increased delivered load from the significant discharger; or (iii) both actions in combination.~~

~~The board may approve use of the second option (clause (ii)) in the previous paragraph in accordance with the following:~~

- ~~1. The VPDES permit for the new or expanded significant discharger includes an annual average total nitrogen effluent limitation of 3.0 mg/l or an annual average total phosphorus effluent limitation of 0.30 mg/l, as appropriate, or alternative limits as required by 9 VAC 245-40-70 B 4;~~
- ~~2. Best management practices are installed within the locality or localities served by the new or expanded discharger, unless the board determines that installation of the needed best management practices in another locality provides greater water quality benefits;~~
- ~~3. Credit may be given for improvements to best management practices beyond that already required under other federal or state law to the extent that additional reduction in delivered nitrogen or phosphorus load is provided;~~

~~4. Credit may not be given for portions of best management practices financed by government programs; and~~

~~5. The installation, monitoring and maintenance of the best management practices are required by the VPDES permit of the new or expanded significant discharger and the best management practices are installed subsequent to the issuance of the VPDES permit.~~

~~F. Any trade or offset involving a new significant discharger must account for the delivery factor that is assigned to the discharger based on its location within the river basin and must recognize that new significant dischargers have no assigned waste load allocations.~~

~~To ensure the total basin delivered loads of nitrogen and phosphorus are not exceeded, any trading or offsets conducted in accordance with this section shall use delivered loads. The following table contains the delivery factors for both nitrogen and phosphorus assigned to the identified Chesapeake Bay Program watershed model segments within each river basin. A delivered load equals the discharged load multiplied by the delivery factor.~~

<i>CBP Watershed</i>		<i>Nitrogen</i>	<i>Phosphorus</i>
<i>River Basin</i>	<i>Model Segment</i>	<i>Delivery Factor</i>	<i>Delivery Factor</i>
<i>Shenandoah-Potomac</i>	<i>170</i>	<i>0.55</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>180</i>	<i>0.82</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>190</i>	<i>0.42</i>	<i>0.74</i>
<i>Shenandoah-Potomac</i>	<i>200</i>	<i>0.65</i>	<i>0.74</i>
<i>Shenandoah-Potomac</i>	<i>220</i>	<i>0.83</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>550</i>	<i>0.58 or 1.00*</i>	<i>0.44 or 1.00*</i>
<i>Shenandoah-Potomac</i>	<i>740</i>	<i>0.74</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>900</i>	<i>1.00</i>	<i>1.00</i>
<i>Shenandoah-Potomac</i>	<i>910</i>	<i>1.00</i>	<i>1.00</i>
<i>Shenandoah-Potomac</i>	<i>970</i>	<i>1.00</i>	<i>1.00</i>
<i>Shenandoah-Potomac</i>	<i>980</i>	<i>1.00</i>	<i>1.00</i>
<i>Rappahannock</i>	<i>230</i>	<i>0.61</i>	<i>1.03</i>
<i>Rappahannock</i>	<i>560</i>	<i>1.00</i>	<i>1.00</i>
<i>Rappahannock</i>	<i>580</i>	<i>1.00</i>	<i>1.00</i>
<i>Rappahannock</i>	<i>930</i>	<i>1.00</i>	<i>1.00</i>

STATE WATER CONTROL BOARD
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 WATERS AND DISCHARGERS WITHIN THE
 CHESAPEAKE BAY WATERSHED AND 9 VAC 25-720 WATER
 QUALITY MANAGEMENT PLANNING REGULATION

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York	235	0.27	0.43
York	240	0.42	0.43
York	250	0.02	0.58
York	260	0.51	0.58
York	590	1.00	1.00
York	940	1.00	1.00
James	265	0.02	1.10
James	270	0.30	1.10
James	280	0.61	1.10
James	290	0.81	1.00
James	300	0.37	0.42
James	310	0.54	0.39
James	600	1.00	1.00
James	610	1.00	1.00
James	620	1.00	1.00
James	630	1.00	1.00
James	950	1.00	1.00
James	955	1.00	1.00
James	960	1.00	1.00
James	965	1.00	1.00
C. Bay-Eastern Shore	430	1.00	1.00
C. Bay-Eastern Shore	440	1.00	1.00

~~NOTE: *Drainage to Occoquan Reservoir - delivery factors = 0.58 for nitrogen; 0.44 for phosphorus. Drainage outside Occoquan Reservoir - delivery factors = 1.00 for both nitrogen and phosphorus.]~~

9 VAC 25-720-50. Potomac, Shenandoah River Basin.

A. Total maximum daily load (TMDLs).

TMDL #	Stream Name	TMDL Title	City/ County	WBID	Pollutant	WLA	Units
1.	Muddy Creek	Nitrate TMDL Development for Muddy Creek/Dry River, Virginia	Rockingham	B21R	Nitrate	49,389.00	LB/YR
2.	Blacks Run	TMDL Development for Blacks Run and Cooks Creek	Rockingham	B25R	Sediment	32,844.00	LB/YR
3.	Cooks Creek	TMDL Development for Blacks Run and Cooks Creek	Rockingham	B25R	Sediment	69,301.00	LB/YR
4.	Cooks Creek	TMDL Development for Blacks Run and Cooks Creek	Rockingham	B25R	Phosphorus	0	LB/YR
5.	Muddy Creek	TMDL Development for Muddy Creek and Holmans Creek, Virginia	Rockingham	B22R	Sediment	286,939.00	LB/YR
6.	Muddy Creek	TMDL Development for Muddy Creek and Holmans Creek, Virginia	Rockingham	B22R	Phosphorus	38.00	LB/YR
7.	Holmans Creek	TMDL Development for Muddy Creek and Holmans Creek, Virginia	Rockingham/ Shenandoah	B45R	Sediment	78,141.00	LB/YR
8.	Mill Creek	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B29R	Sediment	276.00	LB/YR
9.	Mill Creek	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B29R	Phosphorus	138.00	LB/YR

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10.	Pleasant Run	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B27R	Sediment	0.00	LB/YR
11.	Pleasant Run	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B27R	Phosphorus	0.00	LB/YR
12.	Linville Creek	Total Maximum Load Development for Linville Creek: Bacteria and Benthic Impairments	Rockingham	B46R	Sediment	5.50	TONS/YR
13.	Quail Run	Benthic TMDL for Quail Run	Rockingham	B35R	Ammonia	7,185.00	KG/YR
14.	Quail Run	Benthic TMDL for Quail Run	Rockingham	B35R	Chlorine	27.63	KG/YR
15.	Shenandoah River	Development of Shenandoah River PCB TMDL (South Fork and Main Stem)	Warren & Clarke	B41R, B55R, B57R, B58R	PCBs	179.38	G/YR
16.	Shenandoah River	Development of Shenandoah River PCB TMDL (North Fork)	Warren & Clarke	B51R	PCBs	0.00	G/YR
17.	Shenandoah River	Development of Shenandoah River PCB TMDL (Main Stem)	Warren & Clarke	WV	PCBs	179.38	G/YR
18.	Cockran Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Augusta	B10R	Organic Solids	1,556.00	LB/YR

19.	Lacey Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Rockingham	B47R	Organic Solids	680.00	LB/YR
20.	Orndorff Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Shenandoah	B52R	Organic Solids	103.00	LB/YR
21.	Toms Brook	Benthic TMDL for Toms Brook in Shenandoah County, Virginia	Shenandoah	B50R	Sediment	8.1	T/YR
22.	Goose Creek	Benthic TMDLs for the Goose Creek Watershed	Loudoun, Fauquier	A08R	Sediment	1,587	T/YR
23.	Little River	Benthic TMDLs for the Goose Creek Watershed	Loudoun	A08R	Sediment	105	T/YR
24.	Christians Creek	Fecal Bacteria and General Standard Total Maximum Daily Load Development for Impaired Streams in the Middle River and Upper South River Watersheds, Augusta County, VA	Augusta	B14R	Sediment	145	T/YR
25.	Moffett Creek	Fecal Bacteria and General Standard Total Maximum Daily Load Development for Impaired Streams in the Middle River and Upper	Augusta	B13R	Sediment	0	T/YR

		South River Watersheds, Augusta County, VA					
26.	Upper Middle River	Fecal Bacteria and General Standard Total Maximum Daily Load Development for Impaired Streams in the Middle River and Upper South River Watersheds, Augusta County, VA	Augusta	B10R	Sediment	1.355	T/YR
27.	Mossy Creek	Total Maximum Daily Load Development for Mossy Creek and Long Glade Run: Bacteria and General Standard (Benthic) Impairments	Rockingham	B19R	Sediment	0.04	T/YR
28.	Smith Creek	Total Maximum Daily Load (TMDL) Development for Smith Creek	Rockingham, Shenandoah	B47R	Sediment	353,867	LB/YR

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - POTOMAC RIVER SUB-BASIN RECOMMENDED SEGMENT CLASSIFICATIONS

SEGMENT NUMBER	DESCRIPTION OF SEGMENT	MILE TO MILE	CLASSIFICATION
1-23	Potomac River tributaries from the Virginia-West Virginia state line downstream to the boundary of the Dulles Area Watershed Policy	176.2 – 149.0	WQ

1-24	Potomac River tributaries located within the boundaries of the Dulles Area Watershed Policy	149.0 – 118.4	WQ
1-25	Potomac River tributaries from the downstream limit of the Dulles Area Watershed Policy to Jones Point	118.4 – 107.6	WQ
1-26	Potomac River tributaries from Jones Point downstream to Route 301 bridge	107.6 – 50.2	WQ
1-27	All Streams included in the Occoquan Watershed Policy	_____	WQ
1-28	Potomac tributaries from Route 301 bridge downstream to the mouth of the Potomac River	50.2-0.0	EL

TABLE B2 – POTOMAC RIVER SUB-BASIN - RECOMMENDED PLAN FOR WASTEWATER FACILITIES

FACILITY NUMBER	NAME	RECEIVING STREAM	RECOMMENDED ACTION	SIZE	TREATMENT LEVEL (4)	BOD ₅	OD	TKN	P	INSTITUTIONAL ARRANGEMENT
1	Hillsboro	North Fork Catoctin Creek WQ (1 –23)	Construct new facility	.043 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Loudoun County Sanitation Authority (LCSA)
2	Middleburg	Wancopin Creek WQ (1-23)	Construct new facility; abandon old facility	.135	AST	14 ⁽⁵⁾	-	-	-	LCSA
3	Middleburg East and West	Unnamed tributary to Goose Creek WQ (1 –23)	Abandon- pump to new facility							
4	Round Hill	North Fork Goose Creek	No further action recommended	.2	AWT	10 ⁽⁵⁾	-	-	-	Town of Round Hill
5	St. Louis	Beaver Dam Creek WQ (1-23)	Construct new facility	.086	AST	20 ⁽⁵⁾	-	-	-	LSCA
6	Waterford	South Fork Catoctin Creek WQ (1-23)	No further action recommended	.058	AST	24 ⁽⁵⁾	-	-	-	LSCA
7	Hamilton	Unnamed tributary to South Fork of Catoctin Creek WQ (1-23)	Upgrade and or expand	.605 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Town of Hamilton

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8	Leesburg	Tuscarora Creek (1-24)	Upgrade and or expand	2.5	AWT	1 ⁽⁹⁾	-	1	0.1	Town of Leesburg
9	Lovettesville	Dutchman Creek WQ (1- 23)	Upgrade and or expand	.269 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Town of Lovetteville
10	Purcellville	Unnamed tributary to North Fork Goose Creek WQ (1-23)	No further action recommended	.5	AST	15 ⁽⁵⁾	-	-	-	Town of Purcellville
11	Paenonian Springs	Unnamed tributary to South Fork of Catocin Creek WQ (1-23)	Construct new facility	.264 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	LCSA
12	Cedar Run Regional	Walnut Branch or Kettle Run WQ (1-27)	Construct new facility	1.16 ⁽²⁾	AWT	1 ⁽⁶⁾	-	1	0.1	Fauquier County Sanitation Authority
13	Vint Hill Farms	South Run (1- 27)	Upgrade and/or expand	.246	AST	14 ⁽⁵⁾	-	-	2.5	U.S. Army
14	Arlington	Four Mile Run WQ (1-25)	Upgrade and/or expand	30 ⁽³⁾	AWT	3 ⁽⁸⁾	-	1	0.2	Arlington County
15	Alexandria	Hunting Creek WQ (1-26)	Upgrade and/or expand	54	AWT	3 ⁽⁸⁾	-	1	.02	Alexandria Sanitation Authority
16	Westgate	Potomac River WQ (1-26)	Abandon- pump to Alexandria							
17	Lower Potomac	Pohick Creek WQ (1-26)	Upgrade and/or expand	36(3)	AWT	3/8	-	1	0.2	Fairfax County
18	Little Hunting Creek	Little Hunting Creek WQ (1- 26)	Abandon- pump to Lower Potomac							

19	Doque Creek	Doque Creek WQ (1-26)	Abandon- pump to Lower Potomac							
20	Fort Belvoir 1 and 2	Doque Creek WQ (1-26)	Abandon- pump to Lower Potomac							
21	Lorton	Mills Branch WQ (1-26)	Upgrade and/or expand	1.0	AWT	3 ⁽¹¹⁾	-	1	0.1	District of Columbia
22	UOSA	Tributary to Bull Run WQ (1-27)	Expanded capacity by 5 mgd increments	10.9 ⁽³⁾	AWT	1 ⁽⁶⁾	-	1	0.1	USOA
23	Gainesville Haymarket	Tributary Rock Branch WQ (1-27)	Abandon Pump to UOSA							
24	Potomac (Mooney)	Neabsco Creek WQ (1-26)	Construct new facility	12 ⁽³⁾	AWT	3 ⁽⁸⁾	-	1	0.2	Occoquan-Woodbridge Dumfries-Triangle Sanitary District
25	Belmont	Marumsco Creek WQ (1-26)	Abandon- pump to Potomac							
26	Featherstone	Farm Creek WQ (1-26)	Abandon- pump to Potomac							
27	Neabsco	Neabsco Creek WQ (1-26)	Abandon- pump to Potomac							
28	Dumfries	Quantico Creek WQ (1-26)	Abandon- pump to Potomac							
29	Dale City #1	Neabsco Creek WQ (1-26)	Upgrade and /or expand	4.0	AWT	3 ⁽⁸⁾	-	1	0.2	Dale Service Corporation (DSC)
30	Dale City #8	Neabsco Creek WQ (1-26)	Upgrade and /or expand	2.0	AWT	3 ⁽⁸⁾	1	1	0.2	DSC
31	Quantico Mainside	Potomac River WQ (1-26)	Upgrade and /or expand	2.0	AWT	3 ⁽⁸⁾	-	1	0.2	U.S. Marine Corps
32	Aquia Creek	Austin Run WQ (1-26)	Construct new facility	3.0	AWT	3 ⁽⁸⁾	-	1	0.2	Aquia Sanitary District

33	Aquia	Aquia Creek WQ (1-26)	Abandon- pump to new facility							
34	Fairview Beach	Potomac River (estuary)	Construct new facility	.05	Secondary	Secondar y	-	-	-	Fairview Beach Sanitary District
35	Dahlgren	Upper Machodoc Creek WQ (1- 28)	Upgrade and/or expand	.2	Secondary	Secondar y	-	-	-	Dahlgren Sanitary District
36	Colonial Beach	Monroe Creek EL (1-28)	No further action recommended	.85	Secondary	28 ^{(5) (13)}				Town of Colonial Beach
37	Machodoc Kinsale		Construct new facility	.89	Secondary & Spray Irrigation	48 ^{(10) (13)}	-	-	-	Machodoc Kinsale Sanitary District
38	Callao		Construct new facility	.25	Secondary & Spray Irrigation	48 ^{(10) (13)}	-	-	-	Callao Sanitary District
39	Heathsville		Construct new facility	.10	Secondary & Spray Irrigation	48 ^{(10) (13)}	-	-	-	Heathsville Sanitary District
40	King George Courthouse	Pine Creek	Construct new facility	.039	Secondary	30 ⁽¹³⁾	-	-	-	King George County

TABLE B2 - NOTES: POTOMAC RIVER SUB-BASIN - RECOMMENDED PLAN FOR WASTEWATER TREATMENT

FACILITIES

⁽¹⁾ Year 2000 design flow 201 Facility Plan, P.L. 92-500, unless otherwise noted.

⁽²⁾ Year 2000 average flow from Potomac/Shenandoah 303(e) Plans, Vol V-A Appendix, 1975 pp. B-33-B-44.

⁽³⁾ Future expansion at unspecified date.

⁽⁴⁾ Secondary treatment: 24-30 mg/l BOD₅, advanced secondary treatment (AST): 11-23 mg/l, advanced wastewater treatment (AWT): <10mg/l BOD₅. A range is given to recognize that various waste treatment processes have different treatment efficiencies.

⁽⁵⁾ Effluent limits calculated using mathematical modeling.

⁽⁶⁾ Effluent limits based on Occoquan Watershed Policy, presented under reevaluation.

⁽⁷⁾ Effluent limits based on treatment levels established by the Potomac/Shenandoah 303(e) Plan, Vol. V-A 1975, p. 237, to protect low flow streams and downstream water supply.

⁽⁸⁾ Effluent limits based on Potomac River Embayment Standards, presently under reevaluation. Nitrogen removal limits deferred until reevaluation is complete.

⁽⁹⁾ Effluent limits based on Dulles Watershed Policy, recommended for reevaluation. Interim effluent limits of 12 mg/l BOD₅ and 20 mg/l Suspended Solids will be met until the Dulles Area Watershed Standards are reevaluated.

⁽¹⁰⁾ Effluent limits based on Virginia Sewerage Regulation, Section 33.02.01.

⁽¹¹⁾ Interim effluent limits of 30 mg/l BOD₅, 30mg/l Suspended Solids, and 4 mg/l Phosphorus, will be effective until average daily flows exceeds 0.75 MGD. At greater flows than 0.75 MGD, the effluent limitations will be defined by the Potomac Embayment Standards.

⁽¹²⁾ Secondary treatment is permitted for this facility due to the the extended outfall into the main stem of the Potomac River.

⁽¹³⁾ This facility was also included in the Rappahannock Area Development Commission (RADCO) 208 Areawide Waste Treatment Management Plan and Potomac-Shenandoah River Basin 303 (e) Water Quality Management Plan.

TABLE B3 - SHENANDOAH RIVER SUB-BASIN RECOMMENDED SEGMENT CLASSIFICATIONS

SEGMENT NUMBER	DESCRIPTION OF SEGMENT	MILE TO MILE	CLASSIFICATION
1-1	North River-main stream and tributaries excluding segments 1-1a, 1-1b	56.4-0.0	EL
1-1a	Muddy Creek-main stream and War Branch, RM 0.1-0.0	3.7 - 1.7	WQ
1-1b	North River-main stream	16.1 - 4.6	WQ
1-2	Middle River-main stream and tributaries excluding segments 1-2a, 1-2b	69.9 - 0.0	EL
1-2a	Middle River-main stream	29.5 - 17.9	WQ
1-2b	Lewis Creek-main stream	9.6 - 0.0	WQ
1-3	South River-main stream and tributaries excluding segment 1-3a	52.2 - 0.0	EL
1-4	South Fork Shenandoah-main stream and tributaries excluding segments 1-4a, 1-4b, 1-4c	102.9 - 0.0	EL
1-4a	South Fork Shenandoah-main stream	88.1 - 78.2	WQ
1-4b	Hawksbill Creek-main stream	6.20 - 0.0	WQ
1-4c	Quail Run-main stream	5.2 - 3.2	WQ
1-5	North Fork Shenandoah- main stream and tributaries excluding segment 1-5a, 1-5h	108.9 – 0.0	EL
1-5a	Stony Creek-main stream	19.9 - 14.9	WQ
1-5b	North Fork Shenandoah-main stream	89.0 - 81.4	WQ

1-6	Shenandoah River-main stream and tributaries excluding segments 1-6a, 1-6b	57.4 - 19.8	EL
1- 6a	Stephens Run-main stream	8.3 - 0.0	WQ
1-6b	Dog Run-main stream	5.2 - 0.0	WQ
1-7	Opequon Creek-main stream and tributaries excluding segments 1-7a, 1-7b	54.9 - 23.6	EL
1-7a	Opequon Creek-main stream	32.3 - 23.6	WQ
1-7b	Abrams Creek-main stream	8.7 - 0.0	WQ
1-8	All Virginia streams upstream of Opequon-Potomac confluence that have headwaters in Frederick County	--	EL
1-9	All Virginia streams upstream of Opequon-Potomac confluence that have headwaters in Highland County	--	EL

* R.M. = River Mile, measured from the river mouth

TABLE B4 - SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED INDUSTRIAL WASTEWATER
 TREATMENT FACILITIES

FACILITY NUMBER	NAME ⁽¹⁾	INDUSTRIAL CATEGORY	RECEIVING STREAM CLASSIFICATION	RECOMMENDED WASTELOAD ALLOCATION ⁽²⁾			COMPLIANCE SCHEDULE
				BOD ₅	TKN	NH ₃ -N	
1	Wampler	Food Processing	War Branch WQ (1-1a)	84 ⁽³⁾	-	-	None
6	Wayn-Tex	Plastic and Synthetic Materials Mfg.*	South River WQ (1-3a)	44 ⁽⁵⁾	-	-	None
7	DuPont	Plastic and Synthetic Materials Mfg.*	South River WQ (1-3a)	600	-	50	None
8	Crompton- Shenandoah	Textile Mills*	South River WQ (1-3a)	60	173 ⁽⁴⁾	88	None
10	General Electric	Electroplating*	South River WQ (1-3a)	BPT Effluent Limits			None
12	Merck	Miscellaneous Chemicals (Pharmaceutical)*	S. F. Shenandoah River WQ (1-4a)	3454	2846	1423	Consent Order
17	VOTAN	Leather, Tanning and Finishing*	Hawksbill Creek WQ (1-4b)	240	75	-	None
21	National Fruit	Food Processing	N. F. Shenandoah River WQ (1-5b)	⁽⁶⁾	⁽⁶⁾	⁽⁶⁾	None

22	Rockingham Poultry	Food Processing	N. F. Shenandoah River WQ (1-5b)	(6)	(6)	(6)	None
23	Shen-Valley Meat Packers	Food Processing	N. F. Shenandoah River WQ (1-5b)	(6)	(6)	(6)	None
35	O'Sullivan	Rubber Processing* Machinery and Mechanical Products Manufacturing	Abrams Creek WQ (1-7b)	BPT Effluent Limits			None

TABLE B4 - NOTES: SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN SELECTED INDUSTRIAL WASTEWATER TREATMENT FACILITIES

(1) An * identifies those industrial categories that are included in EPA's primary industry classification for which potential priority toxic pollutants have been identified.

(2) Allocation (lb/d) based upon 7Q10 stream flow. Tiered permits may allow greater wasteloads during times of higher flow. BPT = Best Practicable Technology.

(3) A summer 1979 stream survey has demonstrated instream D.O. violations. Therefore, the identified wasteload allocation is to be considered as interim and shall be subject to further analysis.

(4) The NPDES permit does not specify TKN but does specify organic-N of 85 lb/d. TKN is the sum of NH₃-N and organic -N.

(5) This allocation is based upon a flow of 0.847 MGD.

(6) The total assimilative capacity for segment WQ (1-5b) will be developed from an intensive stream survey program and development of an appropriate calibrated and verified model. Wasteload allocations for National Fruit, Rockingham Poultry and Shen-Valley will be determined after the development of the calibrated and verified model and the determination of the segment's assimilative capacity.

TABLE B5 - SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED MUNICIPAL WASTEWATER TREATMENT FACILITIES

FACILITY NUMBER	NAME	RECOMMENDED RECEIVING STREAM	FACILITY			WASTELOAD ALLOCATION ⁽³⁾ lb/d BOD ₅	INSTITUTIONAL ARRANGEMENT	COMPLIANCE ⁽⁴⁾ SCHEDULE
			RECOMMENDED ACTION	SIZE ⁽¹⁾	TREATMENT ⁽²⁾ LEVEL			
2	Harrisonburg Rockingham Reg. Sewer Auth.	North River WQ (1-1)	Correct I/I	12.0 ⁽⁵⁾	AST	2,000 ⁽⁶⁾	Harrisonburg- Rockingham Regional Sewer Authority	None

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3	Verona	Middle River WQ (1-2a)	Construct new facility, abandon old plant, correct I/I	0.8	Secondary	Secondary Limits	Augusta County Service Authority	July 1, 1983
4	Staunton	Middle River WQ (1-2a)	Upgrade, provide outfall to Middle River, correct I/I	4.5	Secondary	Secondary Limits	City of Staunton	July 1, 1983
5	Fishersville	Christians Creek EL (1-2)	No further action recommended	2.0	Secondary	Secondary Limits	Augusta County Service Authority	None
9	Waynesboro	South River WQ (1-3a)	Upgrade, correct I/I	4.0	AWT with nitrification	250 ⁽⁵⁾	City of Waynesboro	July 1, 1983
11	Grottoes	South River EL (1-3)	Construct new facility	0.225	Secondary	Secondary Limits	Town of Grottoes	No existing facility
13	Elkton	S.F. Shenandoah River WQ (1-4a)	Construct new facility, abandon old plant	0.4	Secondary	Secondary Limits	Town of Elkton	July 1, 1983
14	Massanutten Public Service Corporation	Quail Run WQ (1- 4c)	No further action recommended	1.0	AWT	84.0 ⁽⁸⁾	Private	None
15	Shenandoah	S.F. Shenandoah River EL (1-4)	Upgrade, expand, correct I/I	0.35	Secondary	Secondary limits	Town of Shenandoah	No existing facility
16	Stanley	S.F. Shenandoah River EL (1-4)	Construct new facility	0.3	Secondary	Secondary limits	Town of Stanley	No existing facility
18	Luray	Hawksbill Creek WQ (1-4b)	Construct new facility, abandon old plant, correct I/I	0.8	Secondary	Secondary Limits	Town of Luray	July 1, 1983
19	Front Royal	Shenandoah River EL (1-6)	Construct new facility, abandon old plant, correct I/I	2.0	Secondary	Secondary Limits	Town of Front Royal	July 1, 1983

20	Broadway	N.F. Shenandoah River WQ (1-5b)	Upgrade, expand, investigate I/I	(6)	(6)	(6)	Town of Broadway	July 1, 1983
24	Timberville	N.F. Shenandoah River WQ (1-5b)	Upgrade, expand, investigate I/I	(6)	(6)	(6)	Town of Timberville	July 1, 1983
25	New Market	N.F. Shenandoah River EL (1-5)	Upgrade, investigate I/I	0.2	Secondary	Secondary Limits	Town of New Market	July 1, 1983
26	Mount Jackson	N.F. Shenandoah River EL (1-5)	Upgrade, expand, correct I/I	.0.2	Secondary	Secondary Limits	Town of Mount Jackson	July 1, 1983
27	Edinburg	N.F. Shenandoah River EL (1-5)	Upgrade, expand, investigate I/I	0.15	Secondary AST	Secondary Limits 65	Town of Edinburg Public	July 1, 1983 None
28	Stony Creek Sanitary District	River EL (1-5) Stony Creek WQ (1-5a)	No further action required	0.6	AST	65	Public	
29	Woodstock	N.F. Shenandoah River EL (1-5)		0.5	Secondary	Secondary Limits	Town of Woodstock	July 1, 1983
30	Toms Brook-Mauertown	Toms Brook EL (1-5)	Construct new facility	0.189	Secondary	Secondary Limits	Toms Brook	No existing facility
31	Strasburg	N.F. Shenandoah River EL (1-5)	Upgrade, expand, correct I/I	0.8	Secondary	Secondary Limits	Town of Strasburg	July 1, 1983
32	Middletown	Meadow Brook EL (1-5)	Upgrade, expand	0.2	Secondary	Secondary	Town of Middletown	July 1, 1983
33	Stephens City Stephens Run	Stephens Run EL (1-6a)	Upgrade, expand	0.54	AST	72	Frederick-Winchester Service Authority	July 1, 1983
34	Berryville	Shenandoah River EL (1-6)	Upgrade, provide outfall to Shenandoah River, investigate I/I	0.41	Secondary	Secondary Limits	Town of Berryville	July 1, 1983
36	Frederick-Winchester Regional	Opequon Creek WQ (1-7a)	Construct new facility, abandon county and city plans, correct I/I	6.0	AWT with nitrification	456 ⁽⁷⁾	Frederick-Winchester Service Authority	July 1, 1983

37	Monterey	West Strait Creek EL (1-9)	Upgrade, correct I/I	0.075	Secondary	Secondary Limits	Town of Monterey	July 1, 1983
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TABLE B5 - NOTES: SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED MUNICIPAL

WASTEWATER TREATMENT FACILITIES

- (1) Year 2000 design flow (MGD) unless otherwise noted.
- (2) Secondary treatment: 24-30 mg/l BOD₅, advanced secondary treatment (AST): 11-23 mg/l BOD₅, advanced wastewater treatment (AWT): <10 mg/l BOD₅. A range is given to recognize that various waste treatment processes have different treatment efficiencies.
- (3) Recommended wasteload allocation calculated using mathematical modeling based upon 7Q10 stream flows. Tiered permits may allow greater wasteloads during periods of higher stream flows. Allocations other than BOD₅ are noted by footnote.
- (4) The July 1, 1983, data is a statutory deadline required by P.L. 92-500, as amended by P.L. 92-217. The timing of construction grant funding may result in some localities to miss this deadline.
- (5) Year 2008 design.
- (6) This BOD loading is based on a 7Q10 flow rate of 26.8 cfs at the HRRSA discharge.
- (7) NH₃ -N = 50 lb/d.
- (8) This allocation is based on a TKN loading no greater than 84 lb/day.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, the associated delivery factors used for trading or offset purposes], and the total nitrogen and total phosphorus [delivered-] waste load allocation[s] for the basin. [These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.]

ICBP Watershed Model Segment	Virginia Waterbody ID	Discharger Name	VPDES Permit No.	Total Nitrogen (TN) Waste Load Allocation (lbs/yr)	TN Delivery Factor	TN-Waste Load Delivered Allocation (lbs/yr)	Total Phosphorus (TP) Waste Load Allocation (lbs/yr)	TP Delivery Factor	TP Waste Load Allocation (lbs/yr)
190	B37R	Coors Brewing Company	VA0073245	55,00054,820	0.42	23,000	4,1004,112	0.74	3,000
190	B14R	Fishersville Regional STP	VA0025291	24,00048,729	0.42	10,000	1,8003,655	0.74	1,400
190	B32R	INVISTA – Waynesboro [(Outfall 101)]	VA0002160	29,00078,941	0.42	12,000	1,3001,009	0.74	940
190	B39R	Luray STP	VA0062642	19,00019,492	0.42	8,200	1,5001,462	0.74	1,100
190	B35R	Massanutte n PSA STP	VA0024732	18,00018,273	0.42	7,700	1,4001,371	0.74	1,000
190	B37R	Merck - Stonewall WWTP	VA0002178	96,00096,184	0.42	40,000	15,00015,365	0.74	11,000
190	B12R	Middle River Regional STP	VA0064793	83,00082,839	0.42	35,000	6,2006,213	0.74	4,600
190	B23R	North River WWTF	VA0060640	190,000194,916	0.42	82,000	15,00014,619	0.74	11,000
190	B22R	[Pilgrims Pride VA Poultry Growers] – Hinton [B38R] [Pilgrims Pride–Alma]	VA0002313 [VA0001961]	27,00027,410 18,273	0.42	12,000	1,4001,371 914	0.74	1,000
190	B31R	Stuarts Draft	VA0066877	29,00048,729	0.42	12,000	2,2003,655	0.74	1,600

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		WWTP							
190	B32R	Waynesboro	VA0025151	49,00048,729	0.42	20,000	3,6003,655	0.74	2,700
		STP							
190	B23R	Weyers	VA0022349	6,1006,091	0.42	2,600	460457	0.74	340
		Cave STP							
200	B58R	Berryville	VA0020532	5,5008,528	0.65	3,600	410640	0.74	300
		STP							
200	B55R	Front Royal	VA0062812	49,00048,729	0.65	32,000	3,6003,655	0.74	2,700
		STP							
200	B49R	Georges	VA0077402	31,00031,065	0.65	20,000	1,6001,553	0.74	1,100
		Chicken							
		LLC							
200	B48R	Mt. Jackson	VA0026441	7,3007,309	0.65	4,800	550548	0.74	410
		STP							
200	B45R	New Market	VA0022853	6,1006,091	0.65	4,000	460457	0.74	340
		STP							
200	B45R	North Fork	VA0090263	23,00023,390	0.65	15,000	1,8001,754	0.74	1,300
		(SIL) WWTF							
200	B49R	Stoney	VA0028380	7,3007,309	0.65	4,800	550548	0.74	410
		Creek SD							
		STP							
	[B50R]	[North Fork	[VA0090328]	9,137			685		
		Regional							
		WWTP (1)]							
200	B51R	Strasburg	VA0020311	12,00011,939	0.65	7,800	900895	0.74	660
		STP							
200	B50R	Woodstock	VA0026468	9,70024,364	0.65	6,300	7301,827	0.74	540
		STP							
220	A06R	Basham	VA0022802	12,00012,182	0.83	10,000	910914	0.75	690
		Simms							
		WWTF							
220	A09R	Broad Run	VA0091383	120,000121,822	0.83	100,000	3,0003,046	0.75	2,300

		WRF							
220	A08R	Leesburg	MD0066184	120,000 <u>121,822</u>	0.83	100,000	<u>9,1009,137</u>	0.75	<u>6,800</u>
		WPCF							
220	A06R	Round Hill	VA0026212	6,1009,137	0.83	5,000	<u>460685</u>	0.75	<u>340</u>
		Town							
		WWTF							
550	A25R	DSC -	VA0024724	36,000 <u>36,547</u>	1.00	36,000	<u>2,2002,193</u>	1.00	<u>2,200</u>
		Section 1							
		WWTF							
550	A25R	DSC -	VA0024678	36,000 <u>36,547</u>	1.00	36,000	<u>2,2002,193</u>	1.00	<u>2,200</u>
		Section 8							
		WWTF							
550	A25E	H L Mooney	VA0025101	220,000 <u>219,280</u>	1.00	220,000	<u>13,00013,157</u>	1.00	<u>13,000</u>
		WWTF							
550	A22R	UOSA -	VA0024988	1,300,000 <u>1,315,682</u>	0.58	760,000	<u>16,00016,446</u>	0.44	<u>7,200</u>
		Centreville							
550	A19R	Vint Hill	VA0020460	5,500 <u>5,482</u>	0.58	3,200	<u>550548</u>	0.44	<u>240</u>
		WWTF							
740	B08R	Opequon	VA0065552	100,000 <u>102,336</u>	0.74	76,000	<u>7,7007,675</u>	0.75	<u>5,700</u>
		WRF							
740	B08R	Parkins Mills	VA0075191	26,000 <u>36,547</u>	0.74	19,000	<u>1,9002,741</u>	0.75	<u>1,400</u>
		STP							
900	A13E	Alexandria	VA0025160	490,000 <u>493,381</u>	1.00	490,000	<u>30,00029,603</u>	1.00	<u>30,000</u>
		SA WWTF							
900	A12E	Arlington	VA0025143	360,000 <u>365,467</u>	1.00	360,000	<u>22,00021,928</u>	1.00	<u>22,000</u>
		County							
		Water PCF							
900	A16R	Noman M	VA0025364	610,000 <u>612,158</u>	1.00	610,000	<u>37,00036,729</u>	1.00	<u>37,000</u>
		Cole Jr PCF							
910	A12R	Blue Plains	DC0021199	580,000 <u>581,458</u>	1.00	580,000	<u>26,00026,166</u>	1.00	<u>26,000</u>
		(VA Share)							
970	A26R	Quantico	VA0028363	20,000 <u>20,101</u>	1.00	20,000	<u>1,2001,206</u>	1.00	<u>1,200</u>
		WWTF							
980	A28R	Aquia	VA0060968	59,000 <u>73,093</u>	1.00	59,000	<u>3,6004,386</u>	1.00	<u>3,600</u>
		WWTF							

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980	A31E	Colonial	VA0026409	18,000 <u>18,273</u>	1.00	18,000	1,800 <u>1,827</u>	1.00	1,800
		Beach STP							
980	A30E	Dahlgren	VA0026514	9,100 <u>9,137</u>	1.00	9,100	910 <u>914</u>	1.00	910
		WWTF							
980	A29E	Fairview	MD0056464	1,800 <u>1,827</u>	1.00	1,800	180 <u>183</u>	1.00	180
		Beach							
980	A30E	US NSWC-	VA0021067	6,600 <u>6,578</u>	1.00	6,600	660 <u>658</u>	1.00	660
		Dahlgren							
		WWTF							
	[A31R]	[Purkins	[VA0070106]	<u>1,096</u>			<u>110</u>		
		Corner STP]							
980]	[A26R]	[Widewater	[VA0090387]	<u>4,600</u>	1.00]	<u>4,600</u>	<u>270</u>	1.00]	<u>270</u>
		WWTF]							
		TOTALS:		<u>4,916,700</u> <u>5,121,242]</u>		<u>3,887,100</u>	<u>245,200</u> <u>252.8</u>		<u>213,130]</u>
						<u>]</u>	<u>60]</u>		

[NOTE: (1) Shenandoah Co.-North Fork Regional WWTP waste load allocations (WLAs) based on a design flow capacity of 0.75 million gallons per day (MGD). If plant is not certified to operate at 0.75 MGD design flow capacity by 12/31/10, the WLAs will be deleted and facility removed from Significant Discharger List.]

9 VAC 25-720-60. James River Basin.

A. Total maximum daily load (TMDLs).

TMDL #	Stream Name	TMDL Title	City/ County	WBID	Pollutant	WLA	Units
1.	Pheasanty Run	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac- Shenandoah and James River Basins	Bath	I14R	Organic Solids	1,231.00	LB/YR
2.	Wallace Mill Stream	Benthic TMDL Reports for Six Impaired Stream	Augusta	I32R	Organic Solids	2,814.00	LB/YR

		Segments in the Potomac-Shenandoah and James River Basins					
3.	Montebello Sp. Branch	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Nelson	H09R	Organic Solids	37.00	LB/YR
4.	Unnamed Tributary to Deep Creek	General Standard Total Maximum Daily Load For Unnamed Tributary to Deep Creek	Nottoway	J11R	Raw Sewage	0	GAL/YR
5.	Unnamed Tributary to Chickahominy River	Total Maximum Daily Load (TMDL) Development for the Unnamed Tributary to the Chickahominy River	Hanover	G05R	Total Phosphorus	409.35	LB/YR

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - UPPER JAMES RIVER BASIN RECOMMENDED SEGMENT CLASSIFICATION

Stream Name	Segment No.	Mile to Mile	Classification	Comments
Maury River	2-4	80.3-0.0	E.L.	Main & tributaries
James River	2-5	271.5-266.0	W.Q.	Main only
James River	2-6	266.0-115.0	E.L.	Main & tributaries except Tye & Rivanna River
Tye River	2-7	41.7-0.0	E.L.	Main & tributaries except Rutledge Creek
Rutledge Creek	2-8	3.0-0.0	W.Q.	Main only
Piney River	2-9	20.6-0.0	E.L.	Main & tributaries
Rivanna River	2-10	20.0-0.0	E.L.	Main & tributaries
Rivanna River	2-11	38.1-20.0	W.Q.	Main only
Rivanna River	2-12	76.7-38.1	E.L.	Main & tributaries
S.F. Rivanna River	2-13	12.2-0.0	E.L.	Main & tributaries
Mechum River	2-14	23.1-0.0	E.L.	Main & tributaries
N.F. Rivanna River	2-15	17.0-0.0	E.L.	Main & tributaries except Standardsville Run
Standardsville Run	2-16	1.2-0.0	W.Q.	Main only
Appomattox River	2-17	156.2-27.7	E.L.	Main & tributaries except Buffalo Creek, Courthouse Branch, and Deep Creek
Buffalo Creek	2-18	20.9-0.0	E.L.	Main & tributaries except Unnamed Tributary @ R.M. 9.3
Unnamed Tributary of Buffalo Creek @ R.M. 9.3	2-19	1.3-0.0	W.Q.	Main only
Courthouse Branch	2-20	0.6-0.0	W.Q.	Main only
Deep Creek	2-21	29.5-0.0	E.L.	Main & tributaries except Unnamed Tributary @ R.M. 25.0
Unnamed Tributary of Deep Creek @ R.M. 25.0	2-22	2.2-0.0	W.Q.	Main only

TABLE B2 - UPPER JAMES RIVER BASIN LOAD ALLOCATIONS BASED ON EXISTING DISCHARGE POINT7

Stream Name	Segment Number	Classification	Mile to Mile	Significant Discharges	Total Assimilative Capacity of Stream BOD5 lbs/day	Wasteload Allocation BOD5 lbs/day2	Reserve BOD5 lbs/day5
Cedar Creek	2-3	E.L.	1.9-0.0	Natural Bridge, Inc. STP	35.0	28.0	7.0 (20%)
Elk Creek	2-3	E.L.	2.8-0.0	Natural Bridge Camp for Boys STP	7.0	3.3	3.7 (53%)
Little Calfpasture River	2-4	E.L.	10.9-4.0	Craigsville	12.0	9.6	2.4 (20%)
Cabin River	2-4	E.L.	1.7-0.0	Millboro	Self -sustaining	None	None
Maury River	2-4	E.L.	19.6-12.2	Lexington STP	380.0	380.0	None
Maury River	2-4	E.L.	12.2-1.2	Georgia Bonded Fibers	760.0	102.03	238.0 (31%)
				Buena Vista STP		420.0	
Maury River	2-4	E.L.	1.2-0.0	Lees Carpets	790.0	425.03	290.0 (37%)
				Glasgow STP		75.0	
James River	2-5	W.Q.	271.5-266.0	Owens-Illinois	4,640.0	4,640.03	None
James River	2-6	E.L.	257.5-231.0	Lynchburg STP	10,100.0	8,000.0	2,060.0 (20%)
				Babcock & Wilcox- NNFD		40.03	
James River	2-6	E.L.	231.0-202.0	Virginia Fibre	3,500.0	3,500.0	None
Rutledge Creek	2-8	W.Q.	3.0-0.0	Amherst STP	46.0	37.0	9.0 (20%)
Town Creek	2-7	E.L.	2.1-0.0	Lovington STP	26.0	21.0	5.0 (20%)
Ivy Creek	2-6	E.L.	0.1-0.0	Schuyler	13.8	11.0	2.8 (20%)
James River	2-6	E.L.	186.0-179.0	Uniroyal, Inc.	1,400.0	19.36	1,336.0 (95%)
				Scottsville STP		45.0	
North Creek	2-6	E.L.	3.1-0.0	Fork Union STP	31.0	25.0	6.0 (20%)
Howells Branch and Licking Hole Creek	2-14	E.L.	0.7-0.0	Morton Frozen Foods	20.0	20.03	None
Standardsville Run	2-16	W.Q.	1.2-0.0	Standardsville STP	17.9	14.3	3.6 (20%)
Rivanna River	2-11	W.Q.	23.5-20.0	Lake Monticello STP	480.0	380.0	100.0 (20%)
Rivanna River	2-10	E.L.	15.0-0.0	Palmyra	250.0	4.0	158.0 (63%)

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				Schwarzenbach Huber		88.03	
Unnamed Tributary of Whispering Creek	2-6	E.L.	1.2-00	Dillwyn STP	38.0	30.0	8.0 (21%)
South Fork Appomattox River	2-17	E.L.	5.5-0.0	Appomattox Lagoon	18.8	15.0	3.8 (20%)
Unnamed Tributary of Buffalo Creek	2-19	W.Q.	1.3-0.0	Hampden-Sydney Coll. STP	10.0	8.0	2.0 (20%)
Appomattox River	2-17	E.L.	106.1-88.0	Farmville STP	280.0	220.0	60.0 (21%)
Unnamed Tributary of Little Guinea Creek	2-17	E.L.	2.5-1.3	Cumberland H.S. Lagoon	0.6	0.5	0.1 (20%)
Unnamed Tributary of Tear Wallet Creek	2-17	E.L.	0.68-0.0	Cumberland Courthouse	8.8	7.0	1.8 (20%)
Courthouse Branch	2-22	W.Q.	2.2-0.0	Amelia STP	21.0	17.0	4.0 (20%)
Unnamed Tributary of Deep Creek	2-22	W.Q.	2.2-0.0	Crewe STP	50.311,12	50.111,12	0.2 (0.4%)11,12, 13

1 Recommended classification.

2 Based on 2020 loads or stream assimilative capacity less 20%.

3 Load allocation based on published NPDES permits.

4 This assimilative capacity is based upon an ammonia loading no greater than 125.1 lbs/day.

5 Percentages refer to reserve as percent of total assimilative capacity. Minimum reserve for future growth and modeling accuracy is 20% unless otherwise noted.

6 No NPDES Permits published (BPT not established) allocation base on maximum value monitored.

7 This table is for the existing discharge point. The recommended plan may involve relocation or elimination of stream discharge.

8 Assimilative capacity will be determined upon completion of the ongoing study by Hydrosience, Inc.

9 Discharges into Karnes Creek, a tributary to the Jackson River.

10 Discharges into Wilson Creek, near its confluence with Jackson River.

11 Five-day Carbonaceous Biological Oxygen Demand (cBOD5).

12 Revision supersedes all subsequent Crewe STP stream capacity, allocation, and reserve references.

13 0.4 percent reserve: determined by SWCB Piedmont Regional Office.

Source: Wiley & Wilson, Inc.

TABLE B3 - UPPER JAMES RIVER BASIN ADDITIONAL LOAD ALLOCATIONS BASED ON RECOMMENDED DISCHARGE
POINT

Stream Name	Segment Number	Classification ¹	Mile to Mile	Significant Discharges	Total Assimilative Capacity of Stream BOD ₅ lbs/day	Wasteload ² Allocation BOD ₅ lbs/day	Reserve ⁴ BOD ₅ lbs/day ⁵
Mill Creek	2-4	E.L.	5.5-0.0	Millboro	30.0	7.3	22.7 (76%)
Calfpasture River	2-4	E.L.	4.9-0.0	Goshen	65.0	12.0	53.0 (82%)
Maury River	2-4	E.L.	1.2-0.0	Lees Carpet	790.0	425.03	235.0 (30%)
				Glasgow Regional S.T.P.		130.0	
Buffalo River	2-7	E.L.	9.6-0.0	Amherst S.T.P.	150.0	120.0	30.0 (20%)
Rockfish River	2-6	E.L.	9.5-0.0	Schuyler S.T.P.	110.0	25.0	85.0 (77%)
Standardsville Run		E.L.		Standardsville	Land Application Recommended		
South Fork Appomattox River		E.L.		Appomattox Lagoon	Connect to Recommended Facility in Roanoke River Basin		
Buffalo Creek	2-17	E.L.	9.3-7.7	Hampden-Sydney College	46.0	23.0	23.0 (50%)
Unnamed trib. of Tear Wallet Creek		E.L.		Cumberland Courthouse	Land Application Recommended		
Courthouse Branch		E.L.		Amelia	Land Application Recommended		
Deep Creek	2-17	E.L.	25.0-12.8	Crewe S.T.P.	69.0	55.0	14.0 (20%)

¹Recommended classification.

²Based on 2020 loads or stream assimilative capacity less 20%.

³Load allocation based on published NPDES permit.

⁴Percentages refer to reserve as percent of total assimilative capacity. Minimum reserve for future growth and modeling accuracy is 20% unless otherwise noted.

5Assimilative capacity will be determined upon completion of the ongoing study by Hydrosience, Inc.

Source: Wiley & Wilson, Inc.

TABLE B4 - SEGMENT CLASSIFICATION UPPER JAMES-JACKSON RIVER SUBAREA

Stream Name	Segment Number	Mile to Mile	Stream Classification	Comments
Back Creek	2-1	16.06-8.46	W.Q.	Main Only
Jackson River	2-1	95.70-24.90	E.L.	Main and Tributaries
Jackson River	2-2	24.90-0.00	W.Q.	Main Only
Jackson River	2-2	24.90-0.00	E.L.	Tributaries Only
James River	2-3	349.50-308.50	E.L.	Main and Tributaries
James River	2-3	308.50-279.41	E.L.	Main and Tributaries

TABLE B5 - UPPER JAMES-JACKSON RIVER SUBAREA WASTELOAD ALLOCATIONS BASED ON EXISTING DISCHARGE
 POINT1

MAP LOCATION	STREAM NAME	SEGMENT NUMBER	SEGMENT CLASSIFICATION STANDARDS	MILE to2 MILE	DISCHARGER	VPDES PERMIT NUMBER	VPDES PERMIT LIMITS BOD5 kg/day	303(e)3 WASTELOAD ALLOCATION BOD5 kg/day
1	<i>Jackson River</i>	2-1	E.L.	93.05-	Virginia Trout	VA0071722	N/A	Secondary
B	<i>Warm Springs Run</i>	2-1	E.L.	3.62-0.00	Warm Springs STP	VA0028233	9.10	Secondary
3	Back Creek	2-1	W.Q.	16.06- 8.46	VEPCO	VA0053317	11.50	11.50
C	X-trib to Jackson River	2-1	E.L.	0.40-0.0	Bacova	VA0024091	9.10	Secondary
D	Hot Springs Run	2-1	E.L.	5.30-0.00	Hot Springs Reg. STP	VA0066303	51.10	Secondary

E	X-trib to Cascades Creek	2-1	E.L.	3.00-0.00	Ashwood- Healing Springs STP	VA0023726	11.30	Secondary
F	Jackson River	2-1	E.L.	50.36-	U.S. Forest Service Bolar Mountain	VA0032123	1.98	Secondary
G	Jackson River	2-1	E.L.	43.55	U.S. Army COE Morris Hill Complex	VA0032115	1.70	Secondary
H	Jackson River	2-1	E.L.	29.84-	Alleghany County Clearwater Park	VA0027955	5.70	Secondary
4	Jackson River	2-1	E.L.	25.99	Covington City Water Treatment Plant	VA0058491	N/A	Secondary
5	Jackson River	2-2	W.Q.	24.64- 19.03	Westvaco	VA0003646	4,195.00	4,195.004
6					Covington City 5 Asphalt Plant	VA0054411	N/A	N/A
7					Hercules, Inc 6	VA0003450	94.00	94.00
J	Jackson River	2-2	W.Q.	19.03- 10.5	Covington STP	VA0025542	341.00	341.00
K	Jackson River			10.5-0.0	Low Moor STP7	VA0027979	22.70	22.70
M					D.S. Lancaster CC8	VA0028509	3.60	3.60
L					Selma STP9	VA0028002	59.00	59.00
10					The Chessie System10	VA0003344	N/A	N/A
N					Clifton Forge STP11	VA0002984	227.00	227.00
11					Lydall12	VA0002984	6.00	6.00
P					Iron Gate STP13	VA0020541	60.00	60.00

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8	Paint Bank Branch	2-2	E.L.	1.52	VDGIF Paint Bank Hatchery	VA0098432	N/A	Secondary
I	Jerrys Run	2-2	E.L.	6.72-	VDOT 1-64 Rest Area	VA0023159	0.54	Secondary
AA	East Branch (Sulfer Spring)	2-2	E.L.	2.16	Norman F. Nicholas	VA0078403	0.05	Secondary
BB	East Branch (Sulfer Spring)	2-2	E.L.	1.91-	Daryl C. Clark	VA0067890	0.068	Secondary
9	Smith Creek	2-2	E.L.	3.44-	Clifton Forge Water Treatment Plant	VA0006076	N/A	Secondary
O	Wilson Creek	2-2	E.L.	0.20-0.0	Cliftdale14 Park STP	VA0027987	24.00	Secondary
2	Pheasanty Run	2-3	E.L.	0.01-	Coursey Springs	VA0006491	434.90	Secondary
Q	Grannys Creek	2-3	E.L.	1.20-	Craig Spring Conference Grounds	VA0027952	3.40	Secondary
CC	X-trib to Big Creek	2-3	E.L.	1.10-	Homer Kelly Residence	VA0074926	0.05	Secondary
12	Mill Creek	2-3	E.L.	0.16-	Columbia Gas Transmission Corp.	VA0004839	N/A	Secondary
R	John Creek	2-3	E.L.	0.20-	New Castle STP(old)	VA0024139	21.00	Secondary
S	Craig Creek	2-3	E.L.	48.45- 36.0	New Castle STP (new)	VA0064599	19.90	Secondary
T	Craig Creek	2-3	E.L.	46.98-	Craig County Schools McCleary E.S.	VA0027758	0.57	Secondary

DD	Eagle Rock Creek	2-3	E.L.	0.08-	Eagle Rock STP15 (Proposed)	VA0076350	2.30	Secondary
U	X-trib to Catawba Creek	2-3	E.L.	0.16	VDMH & R Catawba Hospital	VA0029475	13.60	Secondary
14	Catawba Creek	2-3	E.L.	23.84	Tarmac- Lonestar	VA0078393	0.80	Secondary
FF	Borden Creek	2-3	E.L.	2.00-	Shenandoah Baptist Church Camp	VA0075451	0.88	Secondary
EE	X-trib to Borden Creek	2-3	E.L.	0.36	David B. Pope	VA0076031	0.07	Secondary
V	X-trib to Catawba Creek	2-3	E.L.	3.21-	U.S. FHA Flatwood Acres	VA0068233	0.03	Secondary
W	Catawba Creek	2-3	E.L.	11.54-	Fincastle STP	VA0068233	8.50	Secondary
X	Looney Mill Creek	2-3	E.L.	1.83-	VDOT I-81 Rest Area	VA0023141	0.91	Secondary
Y	X-trib to Stoney	2-3	E.L.	0.57	VDOC Field Unit No. 25 Battle Creek	VA0023523	1.10	Secondary
Z	James River	2-3	E.L.	308.5- 286.0	Buchanan STP	VA0022225	27.00	Secondary

TABLE B5 - NOTES:

N/A Currently No BOD5 limits or wasteload have been imposed by the VPDES permit. Should BOD5 limits (wasteload) be imposed a WQMP amendment would be required for water quality limited segments only.

1 Secondary treatment levels are required in effluent limiting (E.L.) segments. In water quality limiting (W.Q.) segments quantities listed represent wasteload allocations.

2 Ending river miles have not been determined for some Effluent Limited segments.

3 These allocations represent current and original (1977 WQMP) modeling. Future revisions may be necessary based on Virginia State Water Control Board modeling.

4 The total assimilative capacity at critical stream flow for this portion of Segment 2-2 has been modeled and verified by Hydrosience, Inc. (March 1977) to be 4,914 kg/day BOD₅.

5 The discharge is to an unnamed tributary to the Jackson River at Jackson River mile 22.93.

6 The discharge is at Jackson River mile 19.22.

7 The discharge is to the mouth of Karnes Creek, a tributary to the Jackson River at Jackson River mile 5.44.

8 The discharge is at Jackson River mile 6.67.

9 The discharge is at Jackson River mile 5.14.

10 The discharge is at Jackson River mile 4.72.

11 The discharge is at Jackson River mile 3.46.

12 The discharge is at Jackson River mile 1.17

13 The discharge is at Jackson River mile 0.76

14 The discharge is to the mouth of Wilson Creek, a tributary to the Jackson River at Jackson River mile 2.44.

15 The discharge is to the mouth of Eagle Rock Creek, a tributary to the Jackson River at Jackson River mile 330.35.

TABLE B6 - RICHMOND CRATER INTERIM WATER QUALITY MANAGEMENT PLAN STREAM CLASSIFICATIONS - JAMES
RIVER BASIN

SEGMENT	SEGMENT NUMBER	MILE TO MILE	CLASSIFICATION
USGS HUC02080206 James River	2-19	115.0-60.5	W.Q.
USGS HUC02080207 Appomattox	2-23	30.1-0.0	W.Q.

TABLE B6- * Note: A new stream segment classification for the Upper James Basin was adopted in 1981. The SWCB will renumber or realign these segments in the future to reflect these changes. This Plan covers only a portion of these segments.

TABLE B7 - RICHMOND CRATER INTERIM WATER QUALITY MANAGEMENT PLAN– CURRENT PERMITTED WASTE
LOADS (March 1988)

	SUMMER (June-October)							WINTER (November-May)					
	FLOW	BOD5		NH3-N1		DO2		FLOW	BOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)		(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP3	45.00	3002	8.0	-	-	-		45.00	5367		-	-	-
E.I. DuPont-Spruance	8.68	936	-	-	-	-		8.68	936	-	-	-	-
Falling Creek STP	9.00	1202	16.0	-	-	5.9		9.00	2253	30.0	-	-	5.9
Proctor's Creek STP	6.40	1601	30.0	-	-	5.9		11.80	2952	30.0	-	-	5.9
Reynolds Metals Company	0.39	138	-	7	-	-		0.39	138	-	7	-	-
Henrico STP	30.00	3005	12.0	-	-	5.9		30.00	7260	29.0	-	-	5.9
American Tobacco Company	1.94	715	-	-	-	-		1.94	716	-	-	-	-
ICI Americas, Inc.	0.20	152	-	-	-	-		0.20	152	-	-	-	-
Phillip Morris- Park 500	1.50	559	-	-	-	-		1.50	557	-	-	-	-
Allied (Chesterfield)	51.00	1207	-	-	-	-		51.00	1207		-	-	-
Allied (Hopewell)	150.00	2500	-	-	-	-		150.00	2500	-	-	-	-
Hopewell Regional WTF	34.08	12507	44.0	-	-	4.8		34.08	12507	44.0	-	-	4.8
Petersburg STP	15.00	2804	22.4	-	-	5.0		15.00	2804	22.4	-	-	5.0
TOTAL	353.19	30328						358.59	39349				

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Richmond STP's BOD5 is permitted as CBOD5

TABLE B7 - WASTE LOAD ALLOCATIONS FOR THE YEAR 1990

	SUMMER (June-October)						WINTER (November-May)				
	FLOW	CBOD5		NH3-N1,3		DO2	CBOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.00	3002	8.0	2403	6.4	5.6	5367	14.3	5707	15.2	5.6
E.I. DuPont-Spruance	11.05	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	12.00	1602	16.0	961	9.6	5.9	2403	24.0	1402	14.0	5.9
Reynolds Metals Co.	0.49	172		8		6.5	172		8		6.5
Henrico STP	30.00	3002	12.0	2403	9.6	5.6	4756	19.0	3504	44.0	5.6
American Tobacco Co.	2.70	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.20	819		92		4.6	819		92		4.6
Allied (Chesterfield)	53.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	165.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	34.07	12502	44.0	12091	36.2	4.8	12502	44.0	10291	36.2	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	380.81	31084		28978			36679	35958			

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

TABLE B7- WASTE LOAD ALLOCATION FOR THE YEAR 2000

	SUMMER (June-October)						WINTER (November-May)				
	FLOW	CBOD5		NH3-N1,3		DO2	CBOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.08	3002	8.0	2403	6.4	5.6	5367	14.3		15.2	5.6
E.I. DuPont-Spruance	196.99	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	16.80	1602	11.4	961	6.9	5.9	2403	17.1	1402	10.0	5.9
Reynolds Metals Co.	0.78	172		13		6.5	172		13		6.5
Henrico STP	32.80	3002	11.0	2403	8.8	5.6	4756	17.4	3504	12.8	5.6
American Tobacco Co.	3.00	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.90	819		92		4.6	819		92		4.6
Allied (Chesterfield)	56.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	170.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	36.78	12502	40.7	12091	33.5	4.8	12502	40.7	10291	33.5	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	406.43	31084		28982			36679		35963		

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

TABLE B7- WASTE LOAD ALLOCATIONS FOR THE YEAR 2010

	SUMMER (June-October)						WINTER (November-May)				
	FLOW	CBOD5		NH3-N1,3		DO2	CBOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.86	3002	7.8	2403	6.3	5.6	5367	14.0		14.9	5.6
E.I. DuPont-Spruance	16.99	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	24.00	1602	8.0	961	4.8	5.9	2403	12.0	1402	7.0	5.9
Reynolds Metals Co.	0.78	172		13		6.5	172		13		6.5
Henrico STP	38.07	3002	9.5	2403	7.6	5.6	4756	15.0	3504	11.0	5.6
American Tobacco Co.	3.00	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.90	819		92		4.6	819		92		4.6
Allied (Chesterfield)	56.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	180.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	39.61	12502	37.8	10291	31.1	4.8	12502	37.8	10291	31.1	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	432.1	31084		28982			36679		35963		

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, the associated delivery factors used for trading or offset purposes], and the total nitrogen and total phosphorus [delivered] waste load allocation[s] for the basin. [These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.]

280	H12R	Amherst Town - STP	VA0031321	6,000 <u>7,309</u>	0.61	3,700	550 <u>548</u>	1.10	600
280	H05R	BWX Technologies Inc	VA0003697	120,000 <u>187,000</u>	0.61	71,000	760 <u>1,523</u>	1.10	840
280	H05R	Greif Inc. - Riverville	VA0006408	65,000 <u>73,246</u>	0.61	40,000	31,000 <u>29,694</u>	1.10	34,000
280	H31R	Lake Monticello STP	VA0024945	17,000 <u>12,121</u>	0.61	10,000	1,100 <u>909</u>	1.10	1,200
280	H05R	Lynchburg City STP [(1)]	VA0024970	420,000 <u>536,019</u>	0.61	260,000	26,000 <u>33,501</u>	1.10	29,000
280	H28R	Moore's Creek Regional STP	VA0025518	290,000 <u>182,734</u>	0.61	180,000	18,000 <u>13,705</u>	1.10	20,000
290	H38R	Powhatan CC STP	VA0020699	7,700 <u>5,726</u>	0.81	6,200	480 <u>429</u>	1.10	530
300	J11R	Crewe WWTP	VA0020303	7,300 <u>6,091</u>	0.37	2,700	910 <u>457</u>	0.42	380
300	J01R	Farmville WWTP	VA0083135	27,000 <u>29,237</u>	0.37	9,900	3,400 <u>2,193</u>	0.42	1,400
600	G02E	Brown and Williamson	VA0002780	19,000 <u>25,583</u>	1.00	19,000	1,900 <u>1,919</u>	1.00	1,900
600	G01E	E I du Pont - Spruance	VA0004669	200,000 <u>201,080</u>	1.00	200,000	7,800 <u>7,816</u>	1.00	7,800
600	G01E	Falling Creek WWTP	VA0024996	140,000 <u>123,041</u>	1.00	140,000	14,000 <u>9,228</u>	1.00	14,000
600	G01E	Henrico County WWTP	VA0063690	780,000 <u>913,668</u>	1.00	780,000	78,000 <u>68,525</u>	1.00	78,000
600	G03E	Honeywell - Hopewell	VA0005291	1,100,000 <u>1,090,798</u>	1.00	1,100,000	52,000 <u>51,592</u>	1.00	52,000
600	G03R	Hopewell WWTP	VA0066630	1,200,000 <u>1,827,336</u>	1.00	1,200,000	53,000 <u>45,683</u>	1.00	53,000
600	G15E	HRSD - Boat Harbor STP	VA0081256	540,000 <u>609,112</u>	1.00	540,000	49,000 <u>76,139</u>	1.00	49,000
600	G11E	HRSD -	VA0081272	570,000 <u>487,290</u>	1.00	570,000	52,000 <u>60,911</u>	1.00	52,000

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		James River									
		STP									
600	G10E	HRSD - Williamsburg STP	VA0081302	500,000	<u>548,201</u>	1.00	500,000	46,000	<u>68,525</u>	1.00	46,000
600	G02E	Philip Morris - Park 500 [(2)]	VA0026557	40,000	<u>18,547</u>	1.00	40,000	7,400	<u>2,650</u>	1.00	7,400
600	G01E	Proctors Creek WWTP	VA0060194	290,000	<u>328,920</u>	1.00	290,000	29,000	<u>24,669</u>	1.00	29,000
600	G01E	Richmond WWTP [(1)]	VA0063177	1,000,000	<u>1,096,402</u>	1.00	1,000,000	73,000	<u>68,525</u>	1.00	73,000
	[G02E]	[Dominion-Chesterfield (3)]	[VA0004146]		<u>352,036</u>				<u>210</u>		
600	J15R	South Central WW Authority	VA0025437	210,000	<u>280,192</u>	1.00	210,000	21,000	<u>21,014</u>	1.00	21,000
610	G07R	Chickahominy WWTP	VA0088480	2,300	<u>4,934</u>	1.00	2,300	76	<u>123</u>	1.00	76
610	G05R	Tyson Foods - Glen Allen	VA0004031	21,000	<u>19,552</u>	1.00	21,000	430	<u>326</u>	1.00	430
620	G11E	HRSD - Nansemond STP	VA0081299	640,000	<u>730,934</u>	1.00	640,000	58,000	<u>91,367</u>	1.00	58,000
960	G15E	HRSD - Army Base STP	VA0081230	500,000	<u>438,561</u>	1.00	500,000	46,000	<u>54,820</u>	1.00	46,000
960	G15E	HRSD - VIP WWTP	VA0081281	1,100,000	<u>974,579</u>	1.00	1,100,000	97,000	<u>121,822</u>	1.00	97,000
960	G15E	JH Miles & Company	VA0003263	20,000	<u>158,826</u>	1.00	20,000	680	<u>18,654</u>	1.00	680
965]	C07E	HRSD - Ches.- Elizabeth STP	VA0081264	1,500,000	<u>1,526,409</u>	1.00]	1,500,000	110,000	<u>108,674</u>	1.00]	110,000

TOTALS	12,001,600 13,45	11,155,600]	1,148,596 1,205.	1,184,636]
	9,719]		957]	

[NOTES: (1) Waste load allocations for localities served by combined sewers are based on dry weather design flow capacity.

During wet weather flow events the discharge shall achieve a TN concentration of 8.0 mg/l and a TP concentration of 1.0 mg/l.

(2) TN waste load allocation based on the portion of discharged nitrogen that is bioavailable to aquatic life.

(3) Waste load allocations are "net" loads, based on the portion of the nutrient discharge introduced by the facility's process waste streams, and not originating in raw water intake.]

9 VAC 25-720-70. Rappahannock River Basin.

A. Total maximum Daily Load (TMDLs).

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

9 VAC 25-720-70 Rappahannock Area Development Commission (RADCO) 208 Area Wide Waste Treatment Management Plan And Potomac-Shenandoah River Basin 303(e) Water Quality Management Plan is included in The Potomac River Basin section.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, the associated delivery factors used for trading or offset purposes], and the total nitrogen and total phosphorus [delivered-] waste load allocation[s] for the basin. [These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.]

STATE WATER CONTROL BOARD
9 VAC 25-40 POLICY FOR NUTRIENT ENRICHED
WATERS AND DISCHARGERS WITHIN THE
CHESAPEAKE BAY WATERSHED AND 9 VAC 25-720 WATER
QUALITY MANAGEMENT PLANNING REGULATION

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[CBP	Virginia	Discharger	VPDES	Total	Nitrogen	[TN	[TN	Total	[TP	TP
Watershed	Waterbody ID	Name	Permit No.	(TN)	Waste	Delivery	Waste	Phosphorus	Delivery	Waste
Model				Load	Allocation	Factor	Load	(TP) Waste	Factor	Load
Segment				(lbs/yr)			Delivered	Load		Delivered
							Allocation	Allocation		Allocation
							(lbs/yr)	(lbs/yr)		(lbs/yr)
230	E09R	Culpeper	VA0061590	[55,000	<u>54,820</u>	0.61	33,000	<u>[4,100</u>	4.03	<u>4,200</u>
		WWTP [(1)]								
230	E02R	Marshall	VA0031763	7,800	<u>7,797</u>	0.61	4,800	<u>580</u>	4.03	<u>600</u>
		WWTP								
	[E09R]	[Mountain Run	[VA0090212]		<u>18,273</u>			<u>1,371</u>		
		STP]								
230	E13R	Orange STP	VA0021385	18,000	<u>36,547</u>	0.61	11,000	<u>1,400</u>	4.03	<u>1,400</u>
230	E11R	Rapidan STP	VA0090948	7,300	<u>7,309</u>	0.61	4,400	<u>550</u>	4.03	<u>560</u>
230	E02R	Remington	VA0076805	24,000	<u>24,364</u>	0.61	15,000	<u>1,800</u>	4.03	<u>1,900</u>
		WWTP								
230	E02R	[South Wales	VA0080527	11,000	<u>7,309</u>	0.61	6,700	<u>820</u>	4.03	<u>850</u>
		Utility								
		Clevengers								
		Corner] STP								
230	E02R	Warrenton	VA0021172	30,000	<u>30,456</u>	0.61	18,000	<u>2,300</u>	4.03	<u>2,400</u>
		Town STP								
230	E18R	Wilderness	VA0083411	9,100	<u>15,228</u>	0.61	5,600	<u>680</u>	4.03	<u>710</u>
		WWTP								
560	E20E	FMC WWTF	VA0068110	66,000	<u>65,784</u>	1.00	66,000	<u>4,900</u>	4.00	<u>4,900</u>
560	E20E	Fredericksbur	VA0025127	43,000	<u>42,638</u>	1.00	43,000	<u>3,200</u>	4.00	<u>3,200</u>
		g WWTF								
560	E21E	Haymount	VA0089125	12,000	<u>7,066</u>	1.00	12,000	<u>870</u>	4.00	<u>870</u>
		WWTF								
560	E24E	Haynesville	VA0023469	2,800	<u>2,802</u>	1.00	2,800	<u>210</u>	4.00	<u>210</u>
		CC WWTP								
	[E21E]	[Hopyard	[VA0089338]		<u>6,091</u>			<u>457</u>		

<u>Farms STP]</u>									
560	E20E	Little Falls Run	VA0076392	97,000 <u>97,458</u>	1.00	97,000	7,300 <u>7,309</u>	1.00	7,300
		WWTF							
560	E20E	Massaponax	VA0025658	97,000 <u>97,458</u>	1.00	97,000	7,300 <u>7,309</u>	1.00	7,300
		WWTF							
560	E23R	Montross	VA0072729	1,200 <u>1,218</u>	1.00	1,200	91 <u>91</u>	1.00	91
		Westmoreland							
		WWTP							
	<u>[E21E]</u>	<u>[Oakland Park</u>	<u>[VA0086789]</u>	<u>1,706</u>			<u>128</u>		
<u>STP]</u>									
560	E23E	Tappahannock	VA0071471	9,700 <u>9,746</u>	1.00	9,700	730 <u>731</u>	1.00	730
		WWTP							
560	E26E	Urbanna	VA0026263	1,200 <u>1,218</u>	1.00	1,200	91 <u>91</u>	1.00	91
		WWTP							
560	E21R	US Army - Ft.	VA0032034	6,400 <u>6,457</u>	1.00	6,400	480 <u>484</u>	1.00	480
		A P Hill							
		WWTP							
560	E23E	Warsaw	VA0026891	3,600 <u>3,655</u>	1.00	3,600	270 <u>274</u>	1.00	270
		Aerated							
		Lagoons							
580	C01E	Omega	VA0003867	16,000 <u>21,213</u>	1.00	16,000	1,200 <u>1,591</u>	1.00	1,200
		Protein -							
		Reedville							
580	C01E	Reedville	VA0060712	2,400 <u>2,436</u>	1.00	2,400	180 <u>183</u>	1.00	180
		Sanitary							
		District							
930]	C01E	Kilmarnock	VA0020788	6,100 <u>6,091</u>	1.00]	6,100	460 <u>457</u>	1.00]	460
		WTP							
		TOTALS:		526,600 <u>575,140]</u>		462,900]	39,512 <u>43,135]</u>		39,902]

[NOTE: (1) Town of Culpeper WWTP waste load allocations (WLAs) based on a design flow capacity of 4.5 million gallons per day (MGD). If plant is not certified to operate at 4.5 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 36,547 lbs/yr; TP = 2,741 lbs/yr, based on a design flow capacity of 3.0 MGD.]

9 VAC 25-720-110. Chesapeake Bay - Small Coastal - Eastern Shore River Basin.

A. Total maximum Daily Load (TMDLs).

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

Small Coastal and Chesapeake Bay-

TABLE B1 - CURRENT STREAM SEGMENT CLASSIFICATION

Segment No.	Name	Current State [Class]
7-12A	Pocomoke Sound	EL
7-12B	Messongo Creek	EL
7-12C	Beasley Bay	EL
7-12D	Chesconessex Creek	EL
7-13	Onancock Creek	WQ
7-14	Pungoteague	WQ
7-12E	Nandua Creek	EL
7-15	Occohannock Creek	WQ
7-12F	Nassawadox Creek	EL
7-12G	Hungars Creek	EL
7-12H	Cherrystone Inlet	EL
7-12I	South Bay	EL
7-12J	Tangier Island	_____
7-11A	Chincoteague	EL
7-11B	Hog Bogue	EL

7-11C	Metomkim Bay	EL
7-11D	Machipongo River	EL
7-11E	South Ocean	EL

Small Coastal and Chesapeake Bay

TABLE B2 - EASTERN SHORE WASTELOAD ALLOCATIONS

		INTERIM WASTELOAD ALLOCATIONS ⁽¹⁾			FINAL WASTELOAD ALLOCATIONS		
		(Current Permit Limits)					
NAME	RECEIVING STREAM OR ESTUARY	BOD ₅ (lb/d)	SUSPENDED SOLIDS (lb/d)	OIL & GREASE (lb/d)	BOD ₅ (lb/d)	SUSPENDED SOLIDS (lb/d)	OIL & GREASE (lb/d)
Commonwealth of Va. Rest Area	Pitts Cr.	4.3	4.3	--	4.3	4.3	--
Edgewood Park	Bullbegger Cr.	0.80	0.80	--	0.80	0.80	--
Holly Farms	Sandy Bottom Cr.	167(3)	167(3)	10 mg/l	Stream survey/model and determination of final wasteload allocations planned for the summer of 1980.		
Taylor Packing Company	Messongo Cr.	7006(3)	13010(3)	--	Stream survey/model was run previously. No change in permit anticipated.		
No. Accomack E.S.	Messongo Cr.	1.8	1.4	--	1.8	1.4	--
Messick & Wessels Nelsonia	Muddy Cr.	30mg/l ⁽⁴⁾	30mg/l ⁽⁴⁾	--	Interim wasteload allocations may be changed based on BAT guidance.		
Whispering Pines Motel	Deep Cr.	4.8	4.8	--	4.8	4.8	--

Town of Onancock	Onancock Cr.	21	21	--	21	21	--
Messick & Wessels	Onancock Cr.	30mg/l ⁽⁴⁾	30mg/l ⁽⁴⁾	--	Interim wasteload allocations may be changed based on guidance.		
So. Accomack E.S.	Pungoteague Cr.	1.8	1.4	--	1.8	1.4	--
A & P Exmore	Nassawadox Cr.	0.38	0.38	--	0.38	0.38	--
Norstrom Coin Laundry	Nassawadox Cr.	60mg/l ⁽⁴⁾ max.	60mg/l ⁽⁴⁾ max.	--	Interim wasteload allocation may be changed based on BAT guidance.		
NH-Acc. Memorial Hospital	Warehouse Cr.	12.5	12.5	--	21.5	12.5	--
Machipongo E.S. & H.H. Jr. High	Trib. To Oresbus Cr.	5.2	5.2	--	5.2	5.2	--
Town of Cape Charles	Cape Charles Harbor	62.6	62.6	--	62.6	62.6	--
America House	Chesapeake Bay	5	5	--	5	5	--
U.S. Coast Guard Chesapeake Bay	Chesapeake Bay	--	--	10/mg/l ⁽⁵⁾	--	--	10/mg/l ⁽⁵⁾
U.S. Government Cape Charles AFB	Magothy Bay	Currently No Discharge					
Exmore Foods (Process Water)	Trib. To Parting Cr.	200	100	--	Stream survey/model and determination of final wasteload allocations planned for the summer of 1980.		
Exmore Foods (Sanitary)	Trib. To Parting Cr.	30mg/l ⁽⁵⁾	30mg/l ⁽⁵⁾	--	30mg/l ⁽⁵⁾	30mg/l ⁽⁵⁾	--

Perdue Foods (process water)	Parker Cr.	May-Oct 275 367 Nov-Apr. 612 797	--	--	Interim Permit in process. Stream survey/models were run. No substantial change in permit anticipated.			
Perdue Foods (parking lot)	Parker Cr.	30mg/l(5)	30mg/l(5)	--	30mg/l(5)	30mg/l(5)	--	
Accomack Nursing Home	Parker Cr.	2.7	2.6	--	2.7	2.6	--	
U.S. Gov't NASA Wallops Island	Mosquito Cr.	75	75	--	75	75	--	
U.S. Gov't NASA Wallops Island	Cat Cr.	1.25	1.25	--	1.25	1.25	--	
F & G Laundromat	Chincoteague Channel	10	4.8	--	Interim wasteload allocations may be changed based on BAT guidance.			
U.S. Coast Guard	Chincoteatue Channel	--	--	15mg/l (max.)	--	--	15mg/l (max.)	
Virginia-Carolina Seafood	Chincoteague Bay	342	264	5.5	342	264	5.5	
Reginald Stubbs Seafood Co. (VA0005813)	Assateague Channel	--	20	95	--	20	95	
Reginald Stubbs Seafood Co. (VA00056421)	Assateague Channel	--	20 ^[1]	98	--	20.4 ⁽²⁾	98	
Shreaves	Chincoteague Bay	--	16 ⁽²⁾	1.4 ⁽²⁾	--	16 ⁽²⁾	1.4 ⁽²⁾	

Chincoteague Seafood	Chincoteague Bay	342	264	5.5	342	264	5.5
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TABLE B3 - EXISTING OR POTENTIAL SOURCES OF WATER POLLUTION

Location No.	Name	Receiving Estuary	Stream	Flow (MGD)	CBOD (mg/l/#D)	NBOD (mg/l/#D)	Total Suspended Solids (mg/l/#D)	D.O. (mg/l)	FC (MPN/100ml)	Treatment/Operation
1	Comm. Va. Rest Area	Pocomoke Sound	Pitts Cr.	.003	7/0.18		10/0.3	7.5	1	Extended aeration. Sec. Holding pond, CL ₂
2	H.E. Kelley	Pocomoke Sound	Pitts Cr.							Currently no discharges. Out of business
3	Edgewood Park	Pocomoke Sound	Bullbegger Creek	.006 ⁽³⁾	16/0.8 ⁽²⁾		16/0.8 ⁽²⁾			PRI, CL ₂ . Holding Pond
4	Holly Farms	Pocomoke Sound	Sand Bottom Creek	0.18	6/40		15/100	8.0	100	Aerated Lagoons, CL ₂
5	J.W. Taylor	Messongo Creek	Trib. To Messongo	.001	60/50		150/125	8.0		Aerated Lagoons
6	No. Accomack E.S.	Messongo Creek	Trib. To Messongo	.005	22/0.9		30/1.3	9.0		Sec., Septic Tank, Sand Filter Holding Pond

7	Messick & Wessells-Nelsonia	Beasly Bay	Muddy Creek	.005	125/5.2		100/4.2			Sec., Extended Aeration
8	Willets Laundromat	Beasly Bay	Hunting Creek							Prl., Septic Tank
9	Byrd Food	Beasly Bay								No discharge industry
10	Whispering Pines Motel	Beasly Bay	Deep Creek	.009	25/1.9		30/2.3	6.0		Sec., Extended Aeration Holding Pond, CL ₂
11	Town of Onancock	Onancock Creek	North Fork	.19	2/3.2		3/ 4.8	7.5	3	Primary, Primary Settling Sludge Digestion, CL ₂
12	Messick & Wessells-Onley	Onancock Creek	Joynes Branch	.005	100/4.2		150/6.3			Sec., Extended Aeration
13	So. Accomack E.S.	Pungoteague	Trib. To Pungoteague		24/1.8 ⁽²⁾		19/1.4 ⁽²⁾			Sec., Septic Tank, Grease Trap, Sand Filter, Holding Pond. No discharge in 4 yrs.

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14	Great Atlantic & Pacific Tea Company	Nassawado x	Nassawado x	.001	140/1.2		150/1.3		6.5	Sec., Extended Aeration CL ₂
15	Norstrom Coin Laundry	Nassawado x	Trib. To Nassawado x	.008						Sec., Extended Aeration, permit in process
17	N.H.-Acc. Memorial Hospital	Nassawado x	Warehouse Creek	.03	25/1.6		35/2.2	6.5	750	Secondary Aerated Lagoon, CL ₂ Holding pond Stab-Lagoon
18	Machipongo E.S. & N.H. Jr. High School	Hungars Creek	Trib. To Oresbus	.03 ⁽¹⁾	30/5.2 ⁽²⁾		30/5.2 ⁽²⁾			Sec., Stab-Lagoon, Holding Pond no discharge in 4 yrs.
19	B & B Laundromat	Cherry Stone Inlet	Old Castle Creek							Prl. Septic Tank w/discharger
20	KMC Foods, Inc.	Cherry Stone Inlet								No-Discharge industry
21	Herbert West Laundromat	Cherry Stone Inlet	Kings Creek							Prl. Septic Tank w/Discharger

22	Town of Cape Charles	Cape Charles Harbor	Cape Charles Harbor	.165 ⁽²⁾	290/400 ⁽³⁾		139/192 ⁽³⁾			Raw Sewage, Sewage Treatment to be completed by 1982
23	American House Inn	Chesapeake Bay	Chesapeake Bay		30/5 ⁽²⁾		30/5 ⁽²⁾			
24	U.S. Coast Guard	Chesapeake Bay	Chesapeake Bay	.001 ⁽²⁾	30/			5.0 ⁽²⁾	200 ⁽²⁾	Bilgewater
25	U.S. Gov't Cape Charles AFS	Magothy	Magothy	.001 ⁽²⁾				5.0 ⁽³⁾		Sec., CL ₂ , Aerated Lagoon, currently no-discharge
27	Exmore Frozen Foods	Machipongo	Trib. To Parting Cr.	.56	29/135		18/84	6.5		Grass Bays, Screening
28	Exmore Foods (Domestic)	Machipongo	Trib. To Parting Cr.	.02	5/0.8		9/1.5			Septic Tank, Sand Filter
30	Perdue Foods	Metomkin Bay	Parker Creek	1.7	11/156		15/213	6.5	150	Sec., Aerated Lagoon, Holding Pond, CL ₂
31	Perdue Foods	Metomkin Bay	Parker Cr.	.01 ⁽⁴⁾			15/1.3			

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32	Accomack Co. Nursing Home	Metomkin Bay	Parker Cr. North Fork	.011	20/1.8		28/2.6	6.5	100	Sec., Extended Aeration, Holding Pond, CL ₂
33	U.S. Gov't NASA (Wallops Island)	Hog Creek	Cat Creek	.005	30/		30/			Sec., Stab., Pond, Holding Pond, CL ₂
34	Robo Automatic Car	Chincoteagu e Channel	Little Simoneaton							
35	U.S. Gov't NASA	Chincoteagu e Channel	Mosquito Creek	.105	10.6/9.3(3)	112/28	2.0/1.8			Sec., Trickling Filter
36	Trail's End Rec. Vehicle Dev.	Chincoteagu e Channel	Trib to Mosquito Cr.							Septic Tank and Drainfield
37	Coin-Op Laundromat	Chincoteagu e Channel	Chincoteagu e Channel							No discharge
38	F & G Laundromat	Chincoteagu e Channel	Chincoteagu e Channel	.005						
39	U.S. Coast Guard	Chincoteagu e Channel	Chincoteagu e Channel	.001 ⁽²⁾			30/0.2 ⁽²⁾		200 ⁽²⁾	Discharge- Bilgewater
40	Phillip Custis	Ramshorn Bay								Spray Irrigation, no Discharge

[illegible]

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[illegible]

63	Wm. C. Bunting	Chincoteague		.001 ⁽⁴⁾	12		4.8			Oyster
64	Carpenters Seafood	Chincoteague		.001 ⁽⁴⁾	4.1`		2.1			Oyster
64a	Burtens Seafood, Inc.	Chincoteague		.006 ⁽⁴⁾	10.3		.35			Oyster shell stock deal no discharge
69	Jones Bros. Seafood	Chincoteague	Sheepshead Cr.							Oyster & Clams
70	W.E. Jones Seafood	Chincoteague	Sheepshead Creek				46.4 ⁽²⁾			Oyster & Clams
71	Conner & McGee Seafood	Chincoteague	Sheepshead Creek							Oyster & Clams (6) 1
72	Hills Oyster Farm	Chincoteague								Oyster & Clams (5)
73	Thomas E. Reed Seafood	Chincoteague	Deep Hole Creek							Oyster & Clams (6)
74	Mears & Powell	Metomkin								Oyster-Building, also used to clean fish ⁽⁵⁾
75	Wachapreague Seafood Company	Metomkin	Finney Creek	.036 ⁽⁴⁾			144			Sea Clam

76	George D. Spence and Son	Machipongo								Crab Shedding ⁽⁶⁾
77	George D. Spence and Son	Machipongo								Crab Picking, no discharge
78	George T. Bell	Machipongo								No Discharge, Oyster
79	George D. Spence and Son	Machipongo	Upshur Bay							Oyster ⁽⁶⁾
80	Peters Seafood	Machipongo								Oyster ⁽⁶⁾
81	J.E. Hamblin	Machipongo								Oyster, No discharge
83	Nathan Bell Seafood	Machipongo								Clams, Hard ⁽⁵⁾
84	John L. Marshall Seafood	Machipongo								Clams ⁽⁵⁾
85	American Original Foods, Inc.	Machipongo	Parting Creek	.151 ⁽⁴⁾	2632		1337			

86	Harvey & Robert Bowen	Machipongo	Parting Creek	.0006 ⁽⁴⁾	6.2		1.7			Oyster
87	H.M. Terry	Machipongo	Parting Creek	.0004 ⁽⁴⁾	3.3		.62			Oyster
89	Webb's Island Seafood	South Ocean Area								Clams ⁽⁶⁾
90	Cliff's Seafood	South Ocean Area	Mockhorn Bay							Oyster & Clam ⁽⁶⁾
92	H. Allen Smith	South Ocean Area		.037 ⁽⁴⁾	213		522			Sea Clam
94	C & D Seafood, Inc.	South Ocean Area	Oyster Harbor	.04 ⁽⁴⁾	427		204 sea clam 34 ⁽²⁾ oyster			Sea Clam, Oyster
95	B.L. Bell & Sons	South Ocean Area	Oyster Harbor	.001 ⁽⁴⁾	12		.9			Oyster
98	Lance Fisher Seafood Co.	Pocomoke		.02 ⁽⁴⁾	38		12.8			Oyster and Clam
99	Fisher & Williams/Le ster Fisher	Messongo								Building used to shed soft crabs ⁽⁵⁾

100	Grady Rhodes Seafood	Messongo								Sold business, Building used to shed soft crabs ⁽⁵⁾
101	Bonowell Bros.	Messongo	Pocomoke Sound	.001 ⁽⁴⁾	12		2.5			Oyster
102	John H. Lewis & Co.	Messongo	Starling Creek							Oyster SS only, no discharge
103	Eastern Shore Seafood	Beasly								Crab, no discharge
106	Ashton's Seafood, Inc.	Pungoteagu e								Shell stock dealer-no discharge
107	Nandua Seafood Co.	Nandua		.0001 ⁽⁴⁾)	.2		.9			Crab
108	A.M. Acuff	Cherrystone								Building used for storage, no discharge
110	D.L. Edgerton Co.	Cherrystone	Mud Creek							Conch. In operation. Retort drains overboard & fish wash- down ⁽⁶⁾

111 & 112	Tangier Island Seafood, Inc.	Tangier								Crab ⁽⁵⁾
113	Tangier	Chesapeake Bay								1000 KW Power Station
114	Chincoteague	Chincoteague Channel								2100 KW Power Station
115	Parksley									2400 KW Power Station
116	Tasley									1400 KW Power Station
117	Bayview									10,000 KW Power Station
118	Cape Charles	Cape Charles Harbor								1200 KW Power Station
119	Burdick Well & Pump Company									Holding Pond, no discharge
120	Marshall & Son Crab Company	Messongo Cr.								Crab Shedding ⁽⁶⁾
[]	Linton & Lewis Crab Co.	Pocomoke Sound								Crab Shedding ⁽⁶⁾

132	Mason Seafood Co.	Chincoteagu e Channel		.002 ⁽⁴⁾	7.7		13.7			Oysters
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NOTE: ⁽¹⁾ Water quality data taken from Discharge Monitoring Reports or special studies unless indicated.

⁽²⁾ NPDES Permit limits given since the permit is new and discharge monitoring reports not yet available.

⁽³⁾ Data from Accomack-Northampton Co. Water Quality Management Plan.

⁽⁴⁾ Estimated.

⁽⁵⁾ May need a permit--either company has not responded to SWCB letter or operation has just started up.

⁽⁶⁾ No limits -- has an NPDES permit, but is not required to monitor.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, ~~the associated delivery factors used for trading or offset purposes~~], and the total nitrogen and total phosphorus [~~delivered~~] waste load allocation[s] for the basin. [~~These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.~~]

[CBP	Virginia	Discharger	VPDES	Total Nitrogen	[TN	[TN	Total	[TP	TP Waste		
Watershed	Waterbody	Name	Permit No.	(TN)	Waste	Delivery	Waste	Phosphorus	Delivery	Load	
Model	ID			Load		Factor	Load	(TP)	Waste	Factor	Delivered
Segment				Allocation			Delivered	Load			Allocation
				(lbs/yr)			Allocation	Allocation			(lbs/yr)
						(lbs/yr)		(lbs/yr)			
440	C16E	Cape Charles	VA0021288	[6,100] <u>6,091</u>		1.00	6,100	[460] <u>457</u>	1.00		460
		Town WWTP									
440	C11E	Onancock	VA0021253	3,000] <u>3,046</u>		1.00	3,000	230] <u>228</u>	1.00		230

		WWTP							
440	C13E	Shore Memorial	VA0027537	1,200 1,218	1.00	1,200	9191	1.00	91
		Hospital							
440	C10E	Tangier WWTP	VA0067423	1,200 1,218	1.00	1,200	9191	1.00	91
440]	C10R	Tyson Foods -	VA0004049	20,000 22,842	1.00]	20,000	9801,142	1.00]	980
		Temperanceville							
		TOTALS:		31,500 34,415]		31,500]	1,8522,010]		1,852]

9 VAC 25-720-120. York River Basin.

A. Total Maximum Daily Load (TMDLs).

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - RECOMMENDED STREAM SEGMENTS IN THE YORK RIVER BASIN

Segment Number	Classification	Name of River (Description)*
8-1	EL	North Anna River (main and tributaries except Goldmine Creek and Contrary Creek) R.M. 68.4-0.0
8-2	EL	Goldmine Creek
8-3	WQ	Contrary Creek (main only) R.M. 9.5-0.0
8-4	EL	South Anna River (main and tributaries) R.M. 101.2-97.1

8-5	EL	South Anna River (main only) R.M. 97.1-77.4
8-6	EL	South Anna River (main and tributaries) R.M.77.4-0.0
8-7	EL	Pamunkey River (main and tributaries) R.M. 90.7-12.2
8-8	WQ	Pamunkey River (main only) R.M. 12.2-0.0
8-9	EL	Mattaponi River (main and tributaries) R.M.102.2-10.2
8-10	EL	Mattaponi River (main only) R.M.10.2-0.0
8-11	WQ	York River (main only) R.M. 30.4-22.4
8-12	EL	York River (main and tributaries except King Creek and Carter Creek) – R.M. 22.4-0.0
8-13	EL	Carter Creek (main and tributaries) R.M. 5.4-2.0
8-14	EL	Carter Creek (main only) R.M. 2.0-0.0
8-15	EL	King Creek (main only) R.M.5.6-0.0
8-16	WQ	Condemned shellfish areas- Timberneck, Queens, and Sarah Creeks and portions of the main stream of the York River.

*R.M.= River Mile, measured from the river mouth

Source: Roy F. Western

TABLE B2 - WASTE LOAD ALLOCATIONS (IN LBS PER DAY)

POINT SOURCE	1977 WASTE LOAD ²		MAXIMUM ⁷ DAILY LOAD		RECOMMENDED ALLOCATION			RAW WASTE LOAD AT 1995		REQUIRED & REMOVAL EFFICENCY 1995	
	CBO D ₅	UBO D ¹	CBO D ₅	UBO D	CBO D ₅	UBO D	PERCE NT RESER VE	CBO D ₅	UB OD	CBO D ₅	UB OD
Gordonsville	145	398	150	412	150	412	0	1950	2730	92	85
Louisa-Mineral	50	108	55	118	55	118	0	850	1150	93	90
Doswell	52	110	862 ⁸	1407 ⁸	690 ⁸	1125 ⁸	20	1080	1444	85(4)	71
Thornburg	63	150	68	162	68	162	0	1240	1690	94	90
Bowling Green	27	64	29	68	29	68	0	680	926	96	93
Ashland	160	303	235	559	188	447	20	2250	3825	92	88

Hanover (Regional STP)	170	437	280	820	280	820	0	5730	7930	96	90
Chesapeake Corp.	6400	8000	1044 5 ⁵	1500 0 ⁵	1044 5 ⁵	1500 0 ⁵	N/A	5170 0	6463 0	90	90
West Point	105	380	281 ³	1020	225	814	20	1000	1600	85 ⁴	66

¹BOD is Ultimate Biochemical Oxygen Demand. Its concentration is derived by the following: $BOD_5 / 0.80 + 4.5(TKN) = (UBOD)$. NOTE: The amount of TKN utilized depends on the location in the basin.

²Projected for 1977 based on population projections.

³Recommended allocation based on BPCTCA effluent guidelines applied to raw waste loads at 2020.

⁴Minimum removal efficiency.

⁵Allocation based on BPCTCA effluent guidelines; amended by Minute 25, June 3-5, 1979 board meeting.

⁶Based on assumed influent characteristics.

⁷Assimilative capacity.

⁸Amended by Minute 1, August 17, 1978, board meeting.

Source: Roy F. Weston, Inc.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

*The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, ~~the~~
~~associated delivery factors used for trading or offset purposes~~], and the total nitrogen and total phosphorus [~~delivered~~] waste*

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FCBP	Virginia	Discharger	VPDES	Total Nitrogen (TN)		TN	TN—Waste	Total	TP	TP
Watershed	Waterbody ID	Name	Permit No.	Waste	Load	Delivery	Load	Phosphorus	Delivery	Waste
Model				Allocation (lbs/yr)		Factor	Delivered	(TP) Waste	Factor	Load
Segment						Factor	(lbs/yr)	(lbs/yr)	Factor	Allocation (lbs/yr)
240	F20R	Caroline County STP	VA0073504	7,300	6,091	0.42	3,100	460	0.43	200
250	F01R	Gordonsville STP	VA0021105	16,000	11,451	0.02	330	1,000	0.58	590
260	F04R	Ashland WWTP	VA0024899	38,000	24,364	0.51	19,000	2,400	0.58	1,400
260	F09R	Doswell WWTP	VA0029521	110,000	59,510	0.51	56,000	6,800	0.58	4,000
590	F27E	Giant Yorktown Refinery	VA0003018	170,000	167,128	1.00	170,000	22,000	1.00	22,000
590	F27E	HRSD - York River STP	VA0081311	310,000	82,734	1.00	310,000	19,000	1.00	19,000
590	F14R	Parham Landing WWTP	VA0088331	5,200	36,547	1.00	5,200	520	1.00	520
590	F14E	Smurfit Stone - West Point	VA0003115	300,000	259,177	1.00	300,000	28,000	1.00	28,000
590	F12E	Totopotomoy WWTP	VA0089915	120,000	60,911	1.00	120,000	7,600	1.00	7,600

590	F25E	West Point	VA0075434	15,000 <u>7,309</u>	1.00	15,000	910 <u>548</u>	1.00	910
		STP							
940]	C04E	HRSD	VA0028819	1,900 <u>1,218</u>	1.00]	1,900	120 <u>91</u>	1.00]	120
		Mathews							
		Courthouse							
		STP							
		TOTALS:		1,093,400 <u>816,442]</u>		1,000,530]	88,810 <u>137,057]</u>		84,340]

STATE WATER CONTROL BOARD
9 VAC 25-40 ~~POLICY FOR NUTRIENT ENRICHED~~
WATERS AND DISCHARGERS WITHIN THE
CHESAPEAKE BAY WATERSHED AND 9 VAC 25-720

PAGE 1 OF 77

9 VAC 25-40-10. Purpose.

This ~~policy~~ *regulation* provides for the control of discharges of nutrients from point sources affecting state waters that ~~have been~~ are designated "nutrient enriched waters" in 9 VAC 25-260-350 *or are located within the Chesapeake Bay Watershed, which consists of the following Virginia river basins: Potomac River Basin (9 VAC 25-260-390 and 9 VAC 25-260-400), James River Basin (9 VAC 25-260-410, 9 VAC 25-260-415, 9 VAC 25-260-420, and 9 VAC 25-260-430), Rappahannock River Basin (9 VAC 25-260-440), Chesapeake Bay and small coastal basins (9 VAC 25-260-520, Sections 2 through 3g), and the York River Basin (9 VAC 25-260-530).*

The provisions of this chapter and the Water Quality Management Planning Regulation (9 VAC 25-720) constitute the nutrient reduction requirements for point source discharges in the Chesapeake Bay Watershed to protect the Chesapeake Bay and its tidal rivers.

9 VAC 25-40-20. Authority. (Repealed.)

~~The board has adopted this policy under the authority of §§ 62.1-44.15(3), 62.1-44.15(10) and 62.1-44.15(14) of the Code of Virginia.~~

9 VAC 25-40-25. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.

"Expansion" or "expands" means initiating construction of a facility after July 1, 2005 to increase treatment capacity, except that the term does not apply in those cases where a Certificate to Construct was issued on or before July 1, 2005.

"Point source dischargers" or "dischargers" do not include permitted discharges of non-contact cooling water or storm water.]

9 VAC 25-40-30. Strategy for "nutrient enriched waters." *outside of Chesapeake Bay Watershed.*

~~As specified here, the board shall reopen the NPDES permits of certain point source dischargers to "nutrient enriched waters" and shall impose effluent limitations on nutrients in the discharges authorized by those permits and certain new permits.~~

A. All dischargers authorized by ~~NPDES~~ *VPDES* permits issued on or before July 1, 1988, to discharge ~~4~~ 1.0 MGD or more to "nutrient enriched waters" shall ~~be required to~~ meet a monthly average total phosphorus effluent limitation of 2[-0] mg/l ~~as quickly as possible and in any event within three years following modification of the NPDES permit.~~

~~At the time of modification of the NPDES permit, any discharger who voluntarily accepts a permit to require installation and operation of nitrogen removal facilities to meet a monthly average total nitrogen effluent limitation of 10 mg/l for the months of April through October shall be allowed an additional year to meet the phosphorus effluent limitation in 9 VAC 25-40-30 A.~~

B. All New source dischargers as defined in ~~9 VAC 25-30-10~~ [9 VAC 25-31] with a permit issued ~~[that commence discharging with a permit issued]~~ after July 1, 1988, and a design flow greater than or equal to 0.05 are authorized by *VPDES* permits to discharge 0.050 MGD ~~who propose to discharge or more~~ to "nutrient enriched waters" shall be required to meet a monthly average total phosphorus effluent limitation of 2[-0] mg/l.

C. This ~~policy regulation~~ shall not be construed to relax any effluent limitation concerning a nutrient that is imposed under any other requirement of state or federal law. ~~No time extensions outlined in 9 VAC 25-40-30 A for installation and operation of nitrogen removal facilities shall be granted to a discharger if such an effluent limitation or a time extension is already imposed under any other requirement of state or federal law or regulation.~~

D. Any discharger to "nutrient enriched waters" that is located within the Chesapeake Bay Watershed is not subject to the requirements of this section.

9 VAC 25-40-40. Permit amendments.

Whenever the board determines that a permittee has the potential for discharging monthly average total phosphorus concentrations greater than or equal to 2[-0] mg/l or monthly average total nitrogen concentrations greater than or equal to 40 ~~[4.0 x 10⁻⁴ 10]~~ mg/l to "nutrient enriched waters," the board may reopen the ~~NPDES~~ *VPDES* permit to impose monitoring requirements for nutrients in the discharge.

9 VAC 25-40-50. Possibility of further limitations.

The board anticipates that, following implementation of the foregoing requirements and evaluation of effects of this ~~policy regulation~~ and of the results of the nonpoint source control programs, further limitations on discharges of phosphorus or of other nutrients may be necessary to control undesirable growths of aquatic plants.

9VAC25-40-60. Other state petitions.

The board may entertain petitions from adjoining states to consider rulemakings to control nutrients entering tributaries to "nutrient enriched waters" of the adjoining state.

9 VAC 25-40-70. Strategy for Chesapeake Bay Watershed.

A. ~~[In recognition that nutrient reductions from point source discharges have a significant role in the restoration of the Chesapeake Bay and its tidal rivers since they provide a more immediate benefit to water quality and are more reliable than reductions from non-point sources, it~~ ~~it]~~ shall be the policy of the board that point source dischargers within the Chesapeake Bay Watershed ~~[utilize biological nutrient removal technology or its equivalent whenever feasible, as provided by subsection B of this section. For the purposes of this chapter and the related sections of 9 VAC 25-720, the terms "point source dischargers" or "dischargers" do not include permitted discharges of noncontact cooling water or storm water operate installed nutrient removal technologies at the treatment efficiency levels for which they were designed].~~

B. As specified herein, the board shall ~~issue and reissue the VPDES permits of certain point source dischargers within the Chesapeake Bay Watershed and shall impose effluent concentration limitations on nutrients in the discharges authorized by these permits.~~include technology-based effluent concentration limitations in the individual permit for any facility that has installed technology for the control of nitrogen and phosphorus whether by new construction, expansion, or upgrade. Such limitations shall be based on the technology installed by the facility and shall be expressed as annual average concentrations.]

1. Except as provided under subdivision 4 of this subsection, ~~[all significant dischargers, as defined in 9 VAC 25-720, authorized by VPDES permits issued on or before the effective date of this chapter shall achieve an annual average total nitrogen effluent limitation of not more than 8.0 mg/l and an annual average total phosphorus effluent limitation of not more than 1.0 mg/l; provided, however, these dischargers must achieve an annual total nitrogen waste load allocation and an annual total phosphorus waste load allocation as required by the Water Quality Management Planning Regulation (9 VAC 25-720). The applicable limitations shall be achieved within four years following reissuance or major modification of the VPDES permit, but in no case later than December 31, 2010-an owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or more per day, or an equivalent load directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters shall install state-of-the-art nutrient removal technology at the time of the expansion and achieve an annual average total nitrogen effluent concentration of 3.0 milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter].~~

2. Except as provided under subdivision 4 of this subsection, ~~[all dischargers that do not meet the definition of a significant discharger and are authorized by VPDES permits issued on or before July 1, 2004, to discharge 0.040 MGD or more shall be~~

~~required to achieve an annual average total nitrogen effluent limitation of 8.0 mg/l and an annual average total phosphorus effluent limitation of 1.0 mg/l. These limitations shall be included in reissued or modified permits after December 31, 2010, and shall be achieved within four years following reissuance or major modification of the VPDES permits an owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued before July 1, 2005, that expands his facility to discharge 100,000 gallons or more per day up to and including 499,999 gallons per day, or an equivalent load directly into nontidal waters, shall install at a minimum, biological nutrient removal technology at the time of the expansion and achieve an annual average total nitrogen effluent concentration of 8.0 milligrams per liter and an annual average total phosphorus effluent concentration of 1.0 milligram per liter].~~

3. Except as provided under subdivision 4 of this subsection, ~~[all new dischargers or expanded discharges of nitrogen or phosphorus authorized by VPDES permits issued after the effective date of this chapter to discharge 0.040 MGD or more shall achieve an annual average total nitrogen effluent limitation of 3.0 mg/l and an annual average total phosphorus effluent limitation of 0.30 mg/l an owner or operator of a facility authorized by a Virginia Pollutant Discharge Elimination System permit first issued on or after July 1, 2005, to discharge 40,000 gallons or more per day, or an equivalent load shall install:~~

~~a. at a minimum, biological nutrient removal technology at any facility authorized to discharge up to and including 99,999 gallons per day, or an equivalent load, directly into tidal and nontidal waters, or up to and including 499,999 gallons per day, or an equivalent load, to nontidal waters and achieve an annual average total nitrogen effluent concentration of 8.0 milligrams per liter and an annual average total phosphorus effluent concentration of 1.0 milligram per liter; and~~

~~b. state-of-the-art nutrient removal technology at any facility authorized to discharge 100,000 gallons or more per day, or an equivalent load, directly into tidal waters, or 500,000 gallons or more per day, or an equivalent load, directly into nontidal waters and achieve an annual average total nitrogen effluent concentration of 3.0 milligrams per liter and an annual average total phosphorus effluent concentration of 0.3 milligrams per liter.]~~

4. On a case-by-case basis, ~~[a discharger may demonstrate to the satisfaction of the board through treatability, engineering, or other studies that biological nutrient removal technology or its equivalent at a point source discharge cannot achieve the effluent limitations of subdivision 1, 2 or 3 of this subsection, as applicable. In these cases, the board shall require alternative effluent limitations the board deems appropriate for that discharger; the board may establish a technology-based standard and associated concentration limitation less stringent than the applicable standard specified in subdivision 1, 2 or 3 of this subsection, as applicable, based on a demonstration by an owner or operator that the specified standard is not technically or economically feasible for the affected facility or that the technology-based standard and associated concentration limitation~~

would require the owner or operator to construct treatment facilities not otherwise necessary to comply with his waste load allocation without reliance on nutrient credit exchanges pursuant to §62.1-44.19:18 of the Code of Virginia.] provided, however, the discharger must achieve an annual total nitrogen waste load allocation and an annual total phosphorus waste load allocation as required by the Water Quality Management Planning Regulation (9 VAC 25-720).

[5-C.] Any effluent limitation concerning a nutrient that is imposed under any other requirement of state or federal law or regulation that is more stringent than those established herein shall not be affected by this regulation.

[D. In accordance with § 10.1-1187.1 et seq. of the Code of Virginia, the board may approve an alternate compliance method to the technology-based effluent concentration limitations as required by 9 VAC 25-40-70.B. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise ("E3") facility or an Extraordinary Environmental Enterprise ("E4") facility to allow the suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully-implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed.]

[C-E]. Notwithstanding subsections A ~~and B~~ through D of this section, point source dischargers within the Chesapeake Bay Watershed are also governed by the Water Quality Management Planning Regulation (9 VAC 25-720).

9 VAC 25-720-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Assimilative capacity" means the greatest amount of loading that a water can receive without violating water quality standards, significantly degrading waters of existing high quality, or interfering with the beneficial use of state waters.

"Best management practices (BMP)" means a schedule of activities, prohibition of practices, maintenance procedures and other management practices to prevent or reduce the pollution of state waters. BMPs include treatment requirements, operating and maintenance procedures, schedule of activities, prohibition of activities, and other management practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

"Best practicable control technology currently available (BPT)" means control measures required of point source discharges (other than POTWs) as determined by the EPA pursuant to § 304(b)(1) of the CWA (33 USC § 1251 et seq.) as of 1987.

"Board" means the State Water Control Board (SWCB).

"Chesapeake Bay Watershed" means the following Virginia river basins: Potomac River Basin (9 VAC 25-260-390 and 9 VAC 25-260-400), James River Basin (9 VAC 25-260-410, 9 VAC 25-260-415, 9 VAC 25-260-420, and 9 VAC 25-260-430),

Rappahannock River Basin (9 VAC 25-260-440), Chesapeake Bay and small coastal basins (9 VAC 25-260-520, Sections 2 through 3g), and the York River Basin (9 VAC 25-260-530).

"Clean Water Act or Act (CWA)" means 33 USC § 1251 et seq. as amended, as of 1987.

~~["Delivered waste load" means the discharged load from a point source in a river basin that is adjusted by a delivery factor for any alteration of that load occurring from biological, chemical, and physical processes during riverine transport to tidal waters. Delivery factors are calculated using the Chesapeake Bay Program watershed model.]~~ "Delivery factor" means an estimate of the number of pounds of total nitrogen or total phosphorus delivered to tidal waters for every pound discharged from a permitted facility, as determined by the specific geographic location of the permitted facility, to account for attenuation that occurs during riverine transport between the permitted facility and tidal waters. Delivery factors shall be calculated using the Chesapeake Bay Program watershed model].

"Discharge" means when used without qualification, a discharge of a pollutant or any addition of any pollutant or combination of pollutants to state waters or waters of the contiguous zone or ocean or other floating craft when being used for transportation.

"Effluent limitation" means any restriction imposed by the board on quantities, discharge rates or concentrations of pollutants that are discharged from ~~joint~~ point] sources into state waters.

"Effluent limitation guidelines" means a regulation published by EPA under the Act and adopted by the board.

"Effluent limited segment (EL)" means a stream segment where the water quality does and probably will continue to meet state water quality standards after the application of technology-based effluent limitations required by §§ 301(b) and 306 of the CWA (33 USC § 1251 et seq.) as of 1987.

"Environmental Protection Agency (EPA)" means the United States Environmental Protection Agency.

["Equivalent load" means 2,300 pounds per year of total nitrogen and 300 pounds per year of total phosphorus at a flow volume of 40,000 gallons per day; 5,700 pounds per year of total nitrogen and 760 pounds per year of total phosphorus at a flow volume of 100,000 gallons per day; and 28,500 pounds per year of total nitrogen and 3,800 pounds per year of total phosphorus at a flow volume of 500,000 gallons per day.]

"Load or loading" means the introduction of an amount of matter or thermal energy into a receiving water. Loading may be either man-caused (pollutant loading) or natural (background loading).

"Load allocation (LA)" means the portion of a receiving water's loading capacity attributable either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished.

"Nonpoint source" means a source of pollution, such as a farm or forest land runoff, urban storm water runoff, mine runoff, or salt water intrusion that is not collected or discharged as a point source.

"Point source" means any discernible, defined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agricultural land.

"Pollutant" means any substance, radioactive material, or heat that causes or contributes to, or may cause or contribute to, pollution. It does not mean:

1. Sewage from vessels; or
2. Water, gas, or other material that is injected into a well to facilitate production of oil, dry gas, or water derived in association with oil or gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes if approved by the Department of Mines, Minerals and Energy unless the board determines that such injection or disposal will result in the degradation of ground or surface water resources.

"Pollution" means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters (i) harmful or detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (ii) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (iii) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses; provided that: (a) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner, which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners is sufficient to cause pollution; (b) the discharge of untreated sewage by any owner into state waters; and (c) contributing to the contravention of standards of water quality duly established by the board, are "pollution" for the terms and purposes of this water quality management plan.

"Publicly owned treatment works (POTW)" means any sewage treatment works that is owned by a state or municipality. Sewers, pipes, or other conveyances are included in this definition only if they convey wastewater to a POTW providing treatment.

"Significant ~~[discharges]~~ discharger" means ~~[a point source discharger within the Chesapeake Bay Watershed that is listed in any of the following subsections: 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, or 9 VAC~~

~~25-720-120 C; or a new or expanded point source discharger authorized by a VPDES permit issued after July 1, 2004, to discharge 2,300 pounds per year or more of total nitrogen or 300 pounds per year or more of total phosphorus. (i) a point source discharger to the Chesapeake Bay watershed with a design capacity of 0.5 million gallons per day or greater, or an equivalent load, (ii) a point source discharger to the Chesapeake Bay watershed east of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load, (iii) a planned or newly expanding point source discharger to the Chesapeake Bay watershed, which is expected to be in operation by 2010 with a permitted design of 0.5 million gallons per day or greater, or an equivalent load, or (iv) a planned or newly expanding point source discharger to the Chesapeake Bay watershed east of the fall line with a design capacity of 0.1 million gallons per day or greater, or an equivalent load, which is expected to be in operation by 2010.]~~

"State waters" means all waters, on the surface and under the ground and wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands.

"Surface water" means all waters in the Commonwealth except ground waters as defined in § 62.1-255 of the Code of Virginia.

"Total maximum daily load (TMDL)" means the sum of the individual waste load allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources, natural background loading and usually a safety factor. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.

"Toxic pollutant" means any agent or material including, but not limited to, those listed under § 307(a) of the CWA (33 USC § 1251 et seq. as of 1987), which after discharge will, on the basis of available information, cause toxicity.

"Toxicity" means the inherent potential or capacity of a material to cause adverse effects in a living organism, including acute or chronic effects to aquatic life, detrimental effects on human health or other adverse environmental effects.

"Trading" means the transfer of assigned waste load allocations [or credits] for total nitrogen or total phosphorus among point source dischargers. It does not include the transfer of total nitrogen for total phosphorus, or the reverse.

"Virginia Pollution Discharge Elimination System (VPDES) permit" means a document issued by the board, pursuant to ~~9-VAC 25-30~~ 9 VAC 25-31, authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters.

"Waste load allocation (WLA)" means the portion of a receiving water's loading or assimilative capacity allocated to one of its existing or future point sources of pollution. WLAs are a type of water quality-based effluent limitation.

"Water quality limited segment (WQL)" means any stream segment where the water quality does not or will not meet applicable water quality standards, even after the application of technology-based effluent limitations required by §§ 301(b) and 306 of the CWA (33 USC § 1251 et seq. as of 1987).

"Water quality management plan (WQMP)" means a state- or area-wide waste treatment management plan developed and updated in accordance with the provisions of §§ 205(j), 208 and 303 of the CWA (33 USC § 1251 et seq. as of 1987).

"Water quality standards (WQS)" means narrative statements that describe water quality requirements in general terms, and of numeric limits for specific physical, chemical, biological or radiological characteristics of water. These narrative statements and numeric limits describe water quality necessary to meet and maintain reasonable and beneficial uses such as swimming and, other water based recreation, public water supply and the propagation and growth of aquatic life. The adoption of water quality standards under the State Water Control Law is one of the board's methods of accomplishing the law's purpose.

9 VAC 25-720-30. ~~[Reserved.] Relationship to 9 VAC 25-40, Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed.~~

The provisions of this chapter and 9 VAC 25-40, Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed, constitute the nutrient reduction requirements for point source discharges in the Chesapeake Bay Watershed to protect the Chesapeake Bay and its tidal rivers.

9 VAC 25-720-40. ~~[Reserved.] [Trading and offsets in the Chesapeake Bay Watershed. Implementing Nitrogen and Phosphorus Waste Load Allocations in the Chesapeake Bay Watershed].~~

A. Nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, and 9 VAC 25-720-120 C may be traded ~~[among significant dischargers within the same river basin to assist in the achievement and maintenance of the total basin delivered waste load allocations in accordance with the Chesapeake Bay Watershed Nutrient Credit Exchange Program established under article 4.02 of Chapter 3.1 of Title 62.1 of the Code of Virginia. Trades must account for the delivery factor applicable to each discharge based upon its location within the river basin and calculated by the Chesapeake Bay Program watershed model.]~~

B. ~~[Any proposed trade shall not result in degradation or adverse impacts to local water quality or violations of water quality standards.]~~ The nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110, and 9 VAC 25-720-120 C are considered to be bioavailable to aquatic life. On a case-by-case basis, a discharger may demonstrate to the satisfaction of the board that a significant portion of the nutrients discharged by the facility is not bioavailable to aquatic life. In these cases, the board may limit the permitted discharge to reflect only that portion of the assigned waste load allocation that is bioavailable.]

~~C. [Any trade of nitrogen or phosphorus waste load allocation among individual significant dischargers shall not result in the exceedence of the total basin delivered waste load allocation within which the significant dischargers are located. Unless otherwise noted, the nitrogen and phosphorus waste load allocations assigned to individual significant dischargers in 9 VAC 25-720-50 C, 9 VAC 25-720-60 C, 9 VAC 25-720-70 C, 9 VAC 25-720-110 C, and 9 VAC 25-720-120 C are considered total loads including nutrients present in the intake water from the river, as applicable. On a case-by-case basis, an industrial discharger may demonstrate to the satisfaction of the board that a significant portion of the nutrient load originates in its intake water. In these cases, the board may limit the permitted discharge to reflect only the net nutrient load portion of the assigned waste load allocation.]~~

~~D. The board may authorize trading only through VPDES permits. Trades conducted in accordance with this chapter through VPDES permits shall not require any amendments to this chapter.~~

~~E. Any discharge of nitrogen or phosphorus load from a new significant discharger or any increase in the discharge of nitrogen or phosphorus load from an expansion of an existing significant discharger that would exceed the waste load allocation for that significant discharger shall be accompanied by one of the following actions within the same river basin: (i) a trade for an equivalent or greater load reduction of the same pollutant from one or more existing dischargers; (ii) in accordance with the criteria listed below, the installation, monitoring and maintenance of best management practices that achieve an offsetting reduction of nonpoint source delivered load of nitrogen or phosphorus that the board determines is at least twice the reduction in delivered load compared to the new or increased delivered load from the significant discharger; or (iii) both actions in combination.~~

~~The board may approve use of the second option (clause (ii)) in the previous paragraph in accordance with the following:~~

- ~~1. The VPDES permit for the new or expanded significant discharger includes an annual average total nitrogen effluent limitation of 3.0 mg/l or an annual average total phosphorus effluent limitation of 0.30 mg/l, as appropriate, or alternative limits as required by 9 VAC 245-40-70 B 4;~~
- ~~2. Best management practices are installed within the locality or localities served by the new or expanded discharger, unless the board determines that installation of the needed best management practices in another locality provides greater water quality benefits;~~
- ~~3. Credit may be given for improvements to best management practices beyond that already required under other federal or state law to the extent that additional reduction in delivered nitrogen or phosphorus load is provided;~~

~~4. Credit may not be given for portions of best management practices financed by government programs; and~~

~~5. The installation, monitoring and maintenance of the best management practices are required by the VPDES permit of the new or expanded significant discharger and the best management practices are installed subsequent to the issuance of the VPDES permit.~~

~~F. Any trade or offset involving a new significant discharger must account for the delivery factor that is assigned to the discharger based on its location within the river basin and must recognize that new significant dischargers have no assigned waste load allocations.~~

~~To ensure the total basin delivered loads of nitrogen and phosphorus are not exceeded, any trading or offsets conducted in accordance with this section shall use delivered loads. The following table contains the delivery factors for both nitrogen and phosphorus assigned to the identified Chesapeake Bay Program watershed model segments within each river basin. A delivered load equals the discharged load multiplied by the delivery factor.~~

<i>CBP Watershed</i>		<i>Nitrogen</i>	<i>Phosphorus</i>
<i>River Basin</i>	<i>Model Segment</i>	<i>Delivery Factor</i>	<i>Delivery Factor</i>
<i>Shenandoah-Potomac</i>	<i>170</i>	<i>0.55</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>180</i>	<i>0.82</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>190</i>	<i>0.42</i>	<i>0.74</i>
<i>Shenandoah-Potomac</i>	<i>200</i>	<i>0.65</i>	<i>0.74</i>
<i>Shenandoah-Potomac</i>	<i>220</i>	<i>0.83</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>550</i>	<i>0.58 or 1.00*</i>	<i>0.44 or 1.00*</i>
<i>Shenandoah-Potomac</i>	<i>740</i>	<i>0.74</i>	<i>0.75</i>
<i>Shenandoah-Potomac</i>	<i>900</i>	<i>1.00</i>	<i>1.00</i>
<i>Shenandoah-Potomac</i>	<i>910</i>	<i>1.00</i>	<i>1.00</i>
<i>Shenandoah-Potomac</i>	<i>970</i>	<i>1.00</i>	<i>1.00</i>
<i>Shenandoah-Potomac</i>	<i>980</i>	<i>1.00</i>	<i>1.00</i>
<i>Rappahannock</i>	<i>230</i>	<i>0.61</i>	<i>1.03</i>
<i>Rappahannock</i>	<i>560</i>	<i>1.00</i>	<i>1.00</i>
<i>Rappahannock</i>	<i>580</i>	<i>1.00</i>	<i>1.00</i>
<i>Rappahannock</i>	<i>930</i>	<i>1.00</i>	<i>1.00</i>

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York	235	0.27	0.43
York	240	0.42	0.43
York	250	0.02	0.58
York	260	0.51	0.58
York	590	1.00	1.00
York	940	1.00	1.00
James	265	0.02	1.10
James	270	0.30	1.10
James	280	0.61	1.10
James	290	0.81	1.00
James	300	0.37	0.42
James	310	0.54	0.39
James	600	1.00	1.00
James	610	1.00	1.00
James	620	1.00	1.00
James	630	1.00	1.00
James	950	1.00	1.00
James	955	1.00	1.00
James	960	1.00	1.00
James	965	1.00	1.00
C. Bay-Eastern Shore	430	1.00	1.00
C. Bay-Eastern Shore	440	1.00	1.00

~~NOTE: *Drainage to Occoquan Reservoir - delivery factors = 0.58 for nitrogen; 0.44 for phosphorus. Drainage outside Occoquan Reservoir - delivery factors = 1.00 for both nitrogen and phosphorus.]~~

9 VAC 25-720-50. Potomac, Shenandoah River Basin.

A. Total maximum daily load (TMDLs).

TMDL #	Stream Name	TMDL Title	City/ County	WBID	Pollutant	WLA	Units
1.	Muddy Creek	Nitrate TMDL Development for Muddy Creek/Dry River, Virginia	Rockingham	B21R	Nitrate	49,389.00	LB/YR
2.	Blacks Run	TMDL Development for Blacks Run and Cooks Creek	Rockingham	B25R	Sediment	32,844.00	LB/YR
3.	Cooks Creek	TMDL Development for Blacks Run and Cooks Creek	Rockingham	B25R	Sediment	69,301.00	LB/YR
4.	Cooks Creek	TMDL Development for Blacks Run and Cooks Creek	Rockingham	B25R	Phosphorus	0	LB/YR
5.	Muddy Creek	TMDL Development for Muddy Creek and Holmans Creek, Virginia	Rockingham	B22R	Sediment	286,939.00	LB/YR
6.	Muddy Creek	TMDL Development for Muddy Creek and Holmans Creek, Virginia	Rockingham	B22R	Phosphorus	38.00	LB/YR
7.	Holmans Creek	TMDL Development for Muddy Creek and Holmans Creek, Virginia	Rockingham/ Shenandoah	B45R	Sediment	78,141.00	LB/YR
8.	Mill Creek	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B29R	Sediment	276.00	LB/YR
9.	Mill Creek	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B29R	Phosphorus	138.00	LB/YR

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10.	Pleasant Run	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B27R	Sediment	0.00	LB/YR
11.	Pleasant Run	TMDL Development for Mill Creek and Pleasant Run	Rockingham	B27R	Phosphorus	0.00	LB/YR
12.	Linville Creek	Total Maximum Load Development for Linville Creek: Bacteria and Benthic Impairments	Rockingham	B46R	Sediment	5.50	TONS/YR
13.	Quail Run	Benthic TMDL for Quail Run	Rockingham	B35R	Ammonia	7,185.00	KG/YR
14.	Quail Run	Benthic TMDL for Quail Run	Rockingham	B35R	Chlorine	27.63	KG/YR
15.	Shenandoah River	Development of Shenandoah River PCB TMDL (South Fork and Main Stem)	Warren & Clarke	B41R, B55R, B57R, B58R	PCBs	179.38	G/YR
16.	Shenandoah River	Development of Shenandoah River PCB TMDL (North Fork)	Warren & Clarke	B51R	PCBs	0.00	G/YR
17.	Shenandoah River	Development of Shenandoah River PCB TMDL (Main Stem)	Warren & Clarke	WV	PCBs	179.38	G/YR
18.	Cockran Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Augusta	B10R	Organic Solids	1,556.00	LB/YR

19.	Lacey Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Rockingham	B47R	Organic Solids	680.00	LB/YR
20.	Orndorff Spring	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Shenandoah	B52R	Organic Solids	103.00	LB/YR
21.	Toms Brook	Benthic TMDL for Toms Brook in Shenandoah County, Virginia	Shenandoah	B50R	Sediment	8.1	T/YR
22.	Goose Creek	Benthic TMDLs for the Goose Creek Watershed	Loudoun, Fauquier	A08R	Sediment	1,587	T/YR
23.	Little River	Benthic TMDLs for the Goose Creek Watershed	Loudoun	A08R	Sediment	105	T/YR
24.	Christians Creek	Fecal Bacteria and General Standard Total Maximum Daily Load Development for Impaired Streams in the Middle River and Upper South River Watersheds, Augusta County, VA	Augusta	B14R	Sediment	145	T/YR
25.	Moffett Creek	Fecal Bacteria and General Standard Total Maximum Daily Load Development for Impaired Streams in the Middle River and Upper	Augusta	B13R	Sediment	0	T/YR

		South River Watersheds, Augusta County, VA					
26.	Upper Middle River	Fecal Bacteria and General Standard Total Maximum Daily Load Development for Impaired Streams in the Middle River and Upper South River Watersheds, Augusta County, VA	Augusta	B10R	Sediment	1.355	T/YR
27.	Mossy Creek	Total Maximum Daily Load Development for Mossy Creek and Long Glade Run: Bacteria and General Standard (Benthic) Impairments	Rockingham	B19R	Sediment	0.04	T/YR
28.	Smith Creek	Total Maximum Daily Load (TMDL) Development for Smith Creek	Rockingham, Shenandoah	B47R	Sediment	353,867	LB/YR

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - POTOMAC RIVER SUB-BASIN RECOMMENDED SEGMENT CLASSIFICATIONS

SEGMENT NUMBER	DESCRIPTION OF SEGMENT	MILE TO MILE	CLASSIFICATION
1-23	Potomac River tributaries from the Virginia-West Virginia state line downstream to the boundary of the Dulles Area Watershed Policy	176.2 – 149.0	WQ

1-24	Potomac River tributaries located within the boundaries of the Dulles Area Watershed Policy	149.0 – 118.4	WQ
1-25	Potomac River tributaries from the downstream limit of the Dulles Area Watershed Policy to Jones Point	118.4 – 107.6	WQ
1-26	Potomac River tributaries from Jones Point downstream to Route 301 bridge	107.6 – 50.2	WQ
1-27	All Streams included in the Occoquan Watershed Policy	_____	WQ
1-28	Potomac tributaries from Route 301 bridge downstream to the mouth of the Potomac River	50.2-0.0	EL

TABLE B2 – POTOMAC RIVER SUB-BASIN - RECOMMENDED PLAN FOR WASTEWATER FACILITIES

FACILITY NUMBER	NAME	RECEIVING STREAM	RECOMMENDED ACTION	SIZE	TREATMENT LEVEL (4)	BOD ₅	OD	TKN	P	INSTITUTIONAL ARRANGEMENT
1	Hillsboro	North Fork Catoctin Creek WQ (1 –23)	Construct new facility	.043 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Loudoun County Sanitation Authority (LCSA)
2	Middleburg	Wancopin Creek WQ (1-23)	Construct new facility; abandon old facility	.135	AST	14 ⁽⁵⁾	-	-	-	LCSA
3	Middleburg East and West	Unnamed tributary to Goose Creek WQ (1 –23)	Abandon- pump to new facility							
4	Round Hill	North Fork Goose Creek	No further action recommended	.2	AWT	10 ⁽⁵⁾	-	-	-	Town of Round Hill
5	St. Louis	Beaver Dam Creek WQ (1-23)	Construct new facility	.086	AST	20 ⁽⁵⁾	-	-	-	LSCA
6	Waterford	South Fork Catoctin Creek WQ (1-23)	No further action recommended	.058	AST	24 ⁽⁵⁾	-	-	-	LSCA
7	Hamilton	Unnamed tributary to South Fork of Catoctin Creek WQ (1-23)	Upgrade and or expand	.605 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Town of Hamilton

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8	Leesburg	Tuscarora Creek (1-24)	Upgrade and or expand	2.5	AWT	1 ⁽⁹⁾	-	1	0.1	Town of Leesburg
9	Lovettesville	Dutchman Creek WQ (1- 23)	Upgrade and or expand	.269 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	Town of Lovetteville
10	Purcellville	Unnamed tributary to North Fork Goose Creek WQ (1-23)	No further action recommended	.5	AST	15 ⁽⁵⁾	-	-	-	Town of Purcellville
11	Paenonian Springs	Unnamed tributary to South Fork of Catocin Creek WQ (1-23)	Construct new facility	.264 ⁽²⁾	AWT	7 ⁽⁷⁾	-	-	-	LCSA
12	Cedar Run Regional	Walnut Branch or Kettle Run WQ (1-27)	Construct new facility	1.16 ⁽²⁾	AWT	1 ⁽⁶⁾	-	1	0.1	Fauquier County Sanitation Authority
13	Vint Hill Farms	South Run (1- 27)	Upgrade and/or expand	.246	AST	14 ⁽⁵⁾	-	-	2.5	U.S. Army
14	Arlington	Four Mile Run WQ (1-25)	Upgrade and/or expand	30 ⁽³⁾	AWT	3 ⁽⁸⁾	-	1	0.2	Arlington County
15	Alexandria	Hunting Creek WQ (1-26)	Upgrade and/or expand	54	AWT	3 ⁽⁸⁾	-	1	.02	Alexandria Sanitation Authority
16	Westgate	Potomac River WQ (1-26)	Abandon- pump to Alexandria							
17	Lower Potomac	Pohick Creek WQ (1-26)	Upgrade and/or expand	36(3)	AWT	3/8	-	1	0.2	Fairfax County
18	Little Hunting Creek	Little Hunting Creek WQ (1- 26)	Abandon- pump to Lower Potomac							

19	Doque Creek	Doque Creek WQ (1-26)	Abandon- pump to Lower Potomac							
20	Fort Belvoir 1 and 2	Doque Creek WQ (1-26)	Abandon- pump to Lower Potomac							
21	Lorton	Mills Branch WQ (1-26)	Upgrade and/or expand	1.0	AWT	3 ⁽¹¹⁾	-	1	0.1	District of Columbia
22	UOSA	Tributary to Bull Run WQ (1-27)	Expanded capacity by 5 mgd increments	10.9 ⁽³⁾	AWT	1 ⁽⁶⁾	-	1	0.1	USOA
23	Gainesville Haymarket	Tributary Rock Branch WQ (1-27)	Abandon Pump to UOSA							
24	Potomac (Mooney)	Neabsco Creek WQ (1-26)	Construct new facility	12 ⁽³⁾	AWT	3 ⁽⁸⁾	-	1	0.2	Occoquan-Woodbridge Dumfries-Triangle Sanitary District
25	Belmont	Marumsco Creek WQ (1-26)	Abandon- pump to Potomac							
26	Featherstone	Farm Creek WQ (1-26)	Abandon- pump to Potomac							
27	Neabsco	Neabsco Creek WQ (1-26)	Abandon- pump to Potomac							
28	Dumfries	Quantico Creek WQ (1-26)	Abandon- pump to Potomac							
29	Dale City #1	Neabsco Creek WQ (1-26)	Upgrade and /or expand	4.0	AWT	3 ⁽⁸⁾	-	1	0.2	Dale Service Corporation (DSC)
30	Dale City #8	Neabsco Creek WQ (1-26)	Upgrade and /or expand	2.0	AWT	3 ⁽⁸⁾	1	1	0.2	DSC
31	Quantico Mainside	Potomac River WQ (1-26)	Upgrade and /or expand	2.0	AWT	3 ⁽⁸⁾	-	1	0.2	U.S. Marine Corps
32	Aquia Creek	Austin Run WQ (1-26)	Construct new facility	3.0	AWT	3 ⁽⁸⁾	-	1	0.2	Aquia Sanitary District

33	Aquia	Aquia Creek WQ (1-26)	Abandon- pump to new facility							
34	Fairview Beach	Potomac River (estuary)	Construct new facility	.05	Secondary	Secondar y	-	-	-	Fairview Beach Sanitary District
35	Dahlgren	Upper Machodoc Creek WQ (1- 28)	Upgrade and/or expand	.2	Secondary	Secondar y	-	-	-	Dahlgren Sanitary District
36	Colonial Beach	Monroe Creek EL (1-28)	No further action recommended	.85	Secondary	28 ⁽⁵⁾ (13)				Town of Colonial Beach
37	Machodoc Kinsale		Construct new facility	.89	Secondary & Spray Irrigation	48 ⁽¹⁰⁾ (13)	-	-	-	Machodoc Kinsale Sanitary District
38	Callao		Construct new facility	.25	Secondary & Spray Irrigation	48 ⁽¹⁰⁾ (13)	-	-	-	Callao Sanitary District
39	Heathsville		Construct new facility	.10	Secondary & Spray Irrigation	48 ⁽¹⁰⁾ (13)	-	-	-	Heathsville Sanitary District
40	King George Courthouse	Pine Creek	Construct new facility	.039	Secondary	30 ⁽¹³⁾	-	-	-	King George County

TABLE B2 - NOTES: POTOMAC RIVER SUB-BASIN - RECOMMENDED PLAN FOR WASTEWATER TREATMENT

FACILITIES

⁽¹⁾ Year 2000 design flow 201 Facility Plan, P.L. 92-500, unless otherwise noted.

⁽²⁾ Year 2000 average flow from Potomac/Shenandoah 303(e) Plans, Vol V-A Appendix, 1975 pp. B-33-B-44.

⁽³⁾ Future expansion at unspecified date.

⁽⁴⁾ Secondary treatment: 24-30 mg/l BOD₅, advanced secondary treatment (AST): 11-23 mg/l, advanced wastewater treatment (AWT): <10mg/l BOD₅. A range is given to recognize that various waste treatment processes have different treatment efficiencies.

⁽⁵⁾ Effluent limits calculated using mathematical modeling.

⁽⁶⁾ Effluent limits based on Occoquan Watershed Policy, presented under reevaluation.

⁽⁷⁾ Effluent limits based on treatment levels established by the Potomac/Shenandoah 303(e) Plan, Vol. V-A 1975, p. 237, to protect low flow streams and downstream water supply.

⁽⁸⁾ Effluent limits based on Potomac River Embayment Standards, presently under reevaluation. Nitrogen removal limits deferred until reevaluation is complete.

⁽⁹⁾ Effluent limits based on Dulles Watershed Policy, recommended for reevaluation. Interim effluent limits of 12 mg/l BOD₅ and 20 mg/l Suspended Solids will be met until the Dulles Area Watershed Standards are reevaluated.

⁽¹⁰⁾ Effluent limits based on Virginia Sewerage Regulation, Section 33.02.01.

⁽¹¹⁾ Interim effluent limits of 30 mg/l BOD₅, 30mg/l Suspended Solids, and 4 mg/l Phosphorus, will be effective until average daily flows exceeds 0.75 MGD. At greater flows than 0.75 MGD, the effluent limitations will be defined by the Potomac Embayment Standards.

⁽¹²⁾ Secondary treatment is permitted for this facility due to the the extended outfall into the main stem of the Potomac River.

⁽¹³⁾ This facility was also included in the Rappahannock Area Development Commission (RADCO) 208 Areawide Waste Treatment Management Plan and Potomac-Shenandoah River Basin 303 (e) Water Quality Management Plan.

TABLE B3 - SHENANDOAH RIVER SUB-BASIN RECOMMENDED SEGMENT CLASSIFICATIONS

SEGMENT NUMBER	DESCRIPTION OF SEGMENT	MILE TO MILE	CLASSIFICATION
1-1	North River-main stream and tributaries excluding segments 1-1a, 1-1b	56.4-0.0	EL
1-1a	Muddy Creek-main stream and War Branch, RM 0.1-0.0	3.7 - 1.7	WQ
1-1b	North River-main stream	16.1 - 4.6	WQ
1-2	Middle River-main stream and tributaries excluding segments 1-2a, 1-2b	69.9 - 0.0	EL
1-2a	Middle River-main stream	29.5 - 17.9	WQ
1-2b	Lewis Creek-main stream	9.6 - 0.0	WQ
1-3	South River-main stream and tributaries excluding segment 1-3a	52.2 - 0.0	EL
1-4	South Fork Shenandoah-main stream and tributaries excluding segments 1-4a, 1-4b, 1-4c	102.9 - 0.0	EL
1-4a	South Fork Shenandoah-main stream	88.1 - 78.2	WQ
1-4b	Hawksbill Creek-main stream	6.20 - 0.0	WQ
1-4c	Quail Run-main stream	5.2 - 3.2	WQ
1-5	North Fork Shenandoah- main stream and tributaries excluding segment 1-5a, 1-5h	108.9 – 0.0	EL
1-5a	Stony Creek-main stream	19.9 - 14.9	WQ
1-5b	North Fork Shenandoah-main stream	89.0 - 81.4	WQ

1-6	Shenandoah River-main stream and tributaries excluding segments 1-6a, 1-6b	57.4 - 19.8	EL
1- 6a	Stephens Run-main stream	8.3 - 0.0	WQ
1-6b	Dog Run-main stream	5.2 - 0.0	WQ
1-7	Opequon Creek-main stream and tributaries excluding segments 1-7a, 1-7b	54.9 - 23.6	EL
1-7a	Opequon Creek-main stream	32.3 - 23.6	WQ
1-7b	Abrams Creek-main stream	8.7 - 0.0	WQ
1-8	All Virginia streams upstream of Opequon-Potomac confluence that have headwaters in Frederick County	--	EL
1-9	All Virginia streams upstream of Opequon-Potomac confluence that have headwaters in Highland County	--	EL

* R.M. = River Mile, measured from the river mouth

TABLE B4 - SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED INDUSTRIAL WASTEWATER
 TREATMENT FACILITIES

FACILITY NUMBER	NAME ⁽¹⁾	INDUSTRIAL CATEGORY	RECEIVING STREAM CLASSIFICATION	RECOMMENDED WASTELOAD ALLOCATION ⁽²⁾			COMPLIANCE SCHEDULE
				BOD ₅	TKN	NH ₃ -N	
1	Wampler	Food Processing	War Branch WQ (1-1a)	84 ⁽³⁾	-	-	None
6	Wayn-Tex	Plastic and Synthetic Materials Mfg.*	South River WQ (1-3a)	44 ⁽⁵⁾	-	-	None
7	DuPont	Plastic and Synthetic Materials Mfg.*	South River WQ (1-3a)	600	-	50	None
8	Crompton- Shenandoah	Textile Mills*	South River WQ (1-3a)	60	173 ⁽⁴⁾	88	None
10	General Electric	Electroplating*	South River WQ (1-3a)	BPT Effluent Limits			None
12	Merck	Miscellaneous Chemicals (Pharmaceutical)*	S. F. Shenandoah River WQ (1-4a)	3454	2846	1423	Consent Order
17	VOTAN	Leather, Tanning and Finishing*	Hawksbill Creek WQ (1-4b)	240	75	-	None
21	National Fruit	Food Processing	N. F. Shenandoah River WQ (1-5b)	⁽⁶⁾	⁽⁶⁾	⁽⁶⁾	None

22	Rockingham Poultry	Food Processing	N. F. Shenandoah River WQ (1-5b)	(6)	(6)	(6)	None
23	Shen-Valley Meat Packers	Food Processing	N. F. Shenandoah River WQ (1-5b)	(6)	(6)	(6)	None
35	O'Sullivan	Rubber Processing* Machinery and Mechanical Products Manufacturing	Abrams Creek WQ (1-7b)	BPT Effluent Limits			None

TABLE B4 - NOTES: SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN SELECTED INDUSTRIAL WASTEWATER TREATMENT FACILITIES

(1) An * identifies those industrial categories that are included in EPA's primary industry classification for which potential priority toxic pollutants have been identified.

(2) Allocation (lb/d) based upon 7Q10 stream flow. Tiered permits may allow greater wasteloads during times of higher flow. BPT = Best Practicable Technology.

(3) A summer 1979 stream survey has demonstrated instream D.O. violations. Therefore, the identified wasteload allocation is to be considered as interim and shall be subject to further analysis.

(4) The NPDES permit does not specify TKN but does specify organic-N of 85 lb/d. TKN is the sum of NH₃-N and organic -N.

(5) This allocation is based upon a flow of 0.847 MGD.

(6) The total assimilative capacity for segment WQ (1-5b) will be developed from an intensive stream survey program and development of an appropriate calibrated and verified model. Wasteload allocations for National Fruit, Rockingham Poultry and Shen-Valley will be determined after the development of the calibrated and verified model and the determination of the segment's assimilative capacity.

TABLE B5 - SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED MUNICIPAL WASTEWATER TREATMENT FACILITIES

FACILITY NUMBER	NAME	RECOMMENDED RECEIVING STREAM	FACILITY			WASTELOAD ALLOCATION ⁽³⁾ lb/d BOD ₅	INSTITUTIONAL ARRANGEMENT	COMPLIANCE ⁽⁴⁾ SCHEDULE
			RECOMMENDED ACTION	SIZE ⁽¹⁾	TREATMENT ⁽²⁾ LEVEL			
2	Harrisonburg Rockingham Reg. Sewer Auth.	North River WQ (1-1)	Correct I/I	12.0 ⁽⁵⁾	AST	2,000 ⁽⁶⁾	Harrisonburg- Rockingham Regional Sewer Authority	None

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3	Verona	Middle River WQ (1-2a)	Construct new facility, abandon old plant, correct I/I	0.8	Secondary	Secondary Limits	Augusta County Service Authority	July 1, 1983
4	Staunton	Middle River WQ (1-2a)	Upgrade, provide outfall to Middle River, correct I/I	4.5	Secondary	Secondary Limits	City of Staunton	July 1, 1983
5	Fishersville	Christians Creek EL (1-2)	No further action recommended	2.0	Secondary	Secondary Limits	Augusta County Service Authority	None
9	Waynesboro	South River WQ (1-3a)	Upgrade, correct I/I	4.0	AWT with nitrification	250 ⁽⁵⁾	City of Waynesboro	July 1, 1983
11	Grottoes	South River EL (1-3)	Construct new facility	0.225	Secondary	Secondary Limits	Town of Grottoes	No existing facility
13	Elkton	S.F. Shenandoah River WQ (1-4a)	Construct new facility, abandon old plant	0.4	Secondary	Secondary Limits	Town of Elkton	July 1, 1983
14	Massanutten Public Service Corporation	Quail Run WQ (1- 4c)	No further action recommended	1.0	AWT	84.0 ⁽⁸⁾	Private	None
15	Shenandoah	S.F. Shenandoah River EL (1-4)	Upgrade, expand, correct I/I	0.35	Secondary	Secondary limits	Town of Shenandoah	No existing facility
16	Stanley	S.F. Shenandoah River EL (1-4)	Construct new facility	0.3	Secondary	Secondary limits	Town of Stanley	No existing facility
18	Luray	Hawksbill Creek WQ (1-4b)	Construct new facility, abandon old plant, correct I/I	0.8	Secondary	Secondary Limits	Town of Luray	July 1, 1983
19	Front Royal	Shenandoah River EL (1-6)	Construct new facility, abandon old plant, correct I/I	2.0	Secondary	Secondary Limits	Town of Front Royal	July 1, 1983

20	Broadway	N.F. Shenandoah River WQ (1-5b)	Upgrade, expand, investigate I/I	(6)	(6)	(6)	Town of Broadway	July 1, 1983
24	Timberville	N.F. Shenandoah River WQ (1-5b)	Upgrade, expand, investigate I/I	(6)	(6)	(6)	Town of Timberville	July 1, 1983
25	New Market	N.F. Shenandoah River EL (1-5)	Upgrade, investigate I/I	0.2	Secondary	Secondary Limits	Town of New Market	July 1, 1983
26	Mount Jackson	N.F. Shenandoah River EL (1-5)	Upgrade, expand, correct I/I	.0.2	Secondary	Secondary Limits	Town of Mount Jackson	July 1, 1983
27	Edinburg	N.F. Shenandoah River EL (1-5)	Upgrade, expand, investigate I/I	0.15	Secondary AST	Secondary Limits 65	Town of Edinburg Public	July 1, 1983 None
28	Stony Creek Sanitary District	River EL (1-5) Stony Creek WQ (1-5a)	No further action required	0.6	AST	65	Public	
29	Woodstock	N.F. Shenandoah River EL (1-5)		0.5	Secondary	Secondary Limits	Town of Woodstock	July 1, 1983
30	Toms Brook-Mauertown	Toms Brook EL (1-5)	Construct new facility	0.189	Secondary	Secondary Limits	Toms Brook	No existing facility
31	Strasburg	N.F. Shenandoah River EL (1-5)	Upgrade, expand, correct I/I	0.8	Secondary	Secondary Limits	Town of Strasburg	July 1, 1983
32	Middletown	Meadow Brook EL (1-5)	Upgrade, expand	0.2	Secondary	Secondary	Town of Middletown	July 1, 1983
33	Stephens City Stephens Run	Stephens Run EL (1-6a)	Upgrade, expand	0.54	AST	72	Frederick-Winchester Service Authority	July 1, 1983
34	Berryville	Shenandoah River EL (1-6)	Upgrade, provide outfall to Shenandoah River, investigate I/I	0.41	Secondary	Secondary Limits	Town of Berryville	July 1, 1983
36	Frederick-Winchester Regional	Opequon Creek WQ (1-7a)	Construct new facility, abandon county and city plans, correct I/I	6.0	AWT with nitrification	456 ⁽⁷⁾	Frederick-Winchester Service Authority	July 1, 1983

37	Monterey	West Strait Creek EL (1-9)	Upgrade, correct I/I	0.075	Secondary	Secondary Limits	Town of Monterey	July 1, 1983
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TABLE B5 - NOTES: SHENANDOAH RIVER SUB-BASIN - RECOMMENDED PLAN FOR SELECTED MUNICIPAL

WASTEWATER TREATMENT FACILITIES

- (1) Year 2000 design flow (MGD) unless otherwise noted.
- (2) Secondary treatment: 24-30 mg/l BOD₅, advanced secondary treatment (AST): 11-23 mg/l BOD₅, advanced wastewater treatment (AWT): <10 mg/l BOD₅. A range is given to recognize that various waste treatment processes have different treatment efficiencies.
- (3) Recommended wasteload allocation calculated using mathematical modeling based upon 7Q10 stream flows. Tiered permits may allow greater wasteloads during periods of higher stream flows. Allocations other than BOD₅ are noted by footnote.
- (4) The July 1, 1983, data is a statutory deadline required by P.L. 92-500, as amended by P.L. 92-217. The timing of construction grant funding may result in some localities to miss this deadline.
- (5) Year 2008 design.
- (6) This BOD loading is based on a 7Q10 flow rate of 26.8 cfs at the HRRSA discharge.
- (7) NH₃ -N = 50 lb/d.
- (8) This allocation is based on a TKN loading no greater than 84 lb/day.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, the associated delivery factors used for trading or offset purposes], and the total nitrogen and total phosphorus [delivered-] waste load allocation[s] for the basin. [These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.]

ICBP	Virginia	Discharger	VPDES	Total Nitrogen (TN)	TN	TN-Waste	Total	TP	TP
Watershed	Waterbody ID	Name	Permit No.	Waste Load Allocation (lbs/yr)	Delivery Factor	Load Delivered Allocation (lbs/yr)	Phosphorus (TP) Waste Load Allocation (lbs/yr)	Delivery Factor	Waste Load Allocation (lbs/yr)
Model Segment									
190	B37R	Coors Brewing Company	VA0073245	55,00054,820	0.42	23,000	4,1004,112	0.74	3,000
190	B14R	Fishersville Regional STP	VA0025291	24,00048,729	0.42	10,000	1,8003,655	0.74	1,400
190	B32R	INVISTA – Waynesboro [(Outfall 101)]	VA0002160	29,00078,941	0.42	12,000	1,3001,009	0.74	940
190	B39R	Luray STP	VA0062642	19,00019,492	0.42	8,200	1,5001,462	0.74	1,100
190	B35R	Massanutte n PSA STP	VA0024732	18,00018,273	0.42	7,700	1,4001,371	0.74	1,000
190	B37R	Merck - Stonewall WWTP	VA0002178	96,00096,184	0.42	40,000	15,00015,365	0.74	11,000
190	B12R	Middle River Regional STP	VA0064793	83,00082,839	0.42	35,000	6,2006,213	0.74	4,600
190	B23R	North River WWTF	VA0060640	190,000194,916	0.42	82,000	15,00014,619	0.74	11,000
190	B22R	[Pilgrims Pride VA Poultry Growers] – Hinton	VA0002313	27,00027,410	0.42	12,000	1,4001,371	0.74	1,000
	[B38R]	[Pilgrims Pride-Alma]	[VA0001961]	18,273			914		
190	B31R	Stuarts Draft	VA0066877	29,00048,729	0.42	12,000	2,2003,655	0.74	1,600

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		WWTP							
190	B32R	Waynesboro	VA0025151	49,00048,729	0.42	20,000	3,6003,655	0.74	2,700
		STP							
190	B23R	Weyers	VA0022349	6,1006,091	0.42	2,600	460457	0.74	340
		Cave STP							
200	B58R	Berryville	VA0020532	5,5008,528	0.65	3,600	410640	0.74	300
		STP							
200	B55R	Front Royal	VA0062812	49,00048,729	0.65	32,000	3,6003,655	0.74	2,700
		STP							
200	B49R	Georges	VA0077402	31,00031,065	0.65	20,000	1,6001,553	0.74	1,100
		Chicken							
		LLC							
200	B48R	Mt. Jackson	VA0026441	7,3007,309	0.65	4,800	550548	0.74	410
		STP							
200	B45R	New Market	VA0022853	6,1006,091	0.65	4,000	460457	0.74	340
		STP							
200	B45R	North Fork	VA0090263	23,00023,390	0.65	15,000	1,8001,754	0.74	1,300
		(SIL) WWTF							
200	B49R	Stoney	VA0028380	7,3007,309	0.65	4,800	550548	0.74	410
		Creek SD							
		STP							
	[B50R]	[North Fork	[VA0090328]	9,137			685		
		Regional							
		WWTP (1)]							
200	B51R	Strasburg	VA0020311	12,00011,939	0.65	7,800	900895	0.74	660
		STP							
200	B50R	Woodstock	VA0026468	9,70024,364	0.65	6,300	7301,827	0.74	540
		STP							
220	A06R	Basham	VA0022802	12,00012,182	0.83	10,000	910914	0.75	690
		Simms							
		WWTF							
220	A09R	Broad Run	VA0091383	120,000121,822	0.83	100,000	3,0003,046	0.75	2,300

		WRF							
220	A08R	Leesburg	MD0066184	120,000 <u>121,822</u>	0.83	100,000	9,100 <u>9,137</u>	0.75	6,800
		WPCF							
220	A06R	Round Hill	VA0026212	6,100 <u>9,137</u>	0.83	5,000	460 <u>685</u>	0.75	340
		Town							
		WWTF							
550	A25R	DSC -	VA0024724	36,000 <u>36,547</u>	1.00	36,000	2,200 <u>2,193</u>	1.00	2,200
		Section 1							
		WWTF							
550	A25R	DSC -	VA0024678	36,000 <u>36,547</u>	1.00	36,000	2,200 <u>2,193</u>	1.00	2,200
		Section 8							
		WWTF							
550	A25E	H L Mooney	VA0025101	220,000 <u>219,280</u>	1.00	220,000	13,000 <u>13,157</u>	1.00	13,000
		WWTF							
550	A22R	UOSA -	VA0024988	1,300,000 <u>1,315,682</u>	0.58	760,000	16,000 <u>16,446</u>	0.44	7,200
		Centreville							
550	A19R	Vint Hill	VA0020460	5,500 <u>5,482</u>	0.58	3,200	550 <u>548</u>	0.44	240
		WWTF							
740	B08R	Opequon	VA0065552	100,000 <u>102,336</u>	0.74	76,000	7,700 <u>7,675</u>	0.75	5,700
		WRF							
740	B08R	Parkins Mills	VA0075191	26,000 <u>36,547</u>	0.74	19,000	1,900 <u>2,741</u>	0.75	1,400
		STP							
900	A13E	Alexandria	VA0025160	490,000 <u>493,381</u>	1.00	490,000	30,000 <u>29,603</u>	1.00	30,000
		SA WWTF							
900	A12E	Arlington	VA0025143	360,000 <u>365,467</u>	1.00	360,000	22,000 <u>21,928</u>	1.00	22,000
		County							
		Water PCF							
900	A16R	Noman M	VA0025364	610,000 <u>612,158</u>	1.00	610,000	37,000 <u>36,729</u>	1.00	37,000
		Cole Jr PCF							
910	A12R	Blue Plains	DC0021199	580,000 <u>581,458</u>	1.00	580,000	26,000 <u>26,166</u>	1.00	26,000
		(VA Share)							
970	A26R	Quantico	VA0028363	20,000 <u>20,101</u>	1.00	20,000	1,200 <u>1,206</u>	1.00	1,200
		WWTF							
980	A28R	Aquia	VA0060968	59,000 <u>73,093</u>	1.00	59,000	3,600 <u>4,386</u>	1.00	3,600
		WWTF							

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980	A31E	Colonial	VA0026409	18,000 <u>18,273</u>	1.00	18,000	1,800 <u>1,827</u>	1.00	1,800
		Beach STP							
980	A30E	Dahlgren	VA0026514	9,100 <u>9,137</u>	1.00	9,100	910 <u>914</u>	1.00	910
		WWTF							
980	A29E	Fairview	MD0056464	1,800 <u>1,827</u>	1.00	1,800	180 <u>183</u>	1.00	180
		Beach							
980	A30E	US NSWC-	VA0021067	6,600 <u>6,578</u>	1.00	6,600	660 <u>658</u>	1.00	660
		Dahlgren							
		WWTF							
	[A31R]	[Purkins	[VA0070106]	<u>1,096</u>			<u>110</u>		
		Corner STP]							
980]	[A26R]	[Widewater	[VA0090387]	<u>4,600</u>	1.00]	<u>4,600</u>	<u>270</u>	1.00]	<u>270</u>
		WWTF]							
		TOTALS:		<u>4,916,700</u> <u>5,121,242]</u>		<u>3,887,100</u>	<u>245,200</u> <u>252.8</u>		<u>213,130]</u>
						<u>]</u>	<u>60]</u>		

[NOTE: (1) Shenandoah Co.-North Fork Regional WWTP waste load allocations (WLAs) based on a design flow capacity of 0.75 million gallons per day (MGD). If plant is not certified to operate at 0.75 MGD design flow capacity by 12/31/10, the WLAs will be deleted and facility removed from Significant Discharger List.]

9 VAC 25-720-60. James River Basin.

A. Total maximum daily load (TMDLs).

TMDL #	Stream Name	TMDL Title	City/ County	WBID	Pollutant	WLA	Units
1.	Pheasanty Run	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac- Shenandoah and James River Basins	Bath	I14R	Organic Solids	1,231.00	LB/YR
2.	Wallace Mill Stream	Benthic TMDL Reports for Six Impaired Stream	Augusta	I32R	Organic Solids	2,814.00	LB/YR

		Segments in the Potomac-Shenandoah and James River Basins					
3.	Montebello Sp. Branch	Benthic TMDL Reports for Six Impaired Stream Segments in the Potomac-Shenandoah and James River Basins	Nelson	H09R	Organic Solids	37.00	LB/YR
4.	Unnamed Tributary to Deep Creek	General Standard Total Maximum Daily Load For Unnamed Tributary to Deep Creek	Nottoway	J11R	Raw Sewage	0	GAL/YR
5.	Unnamed Tributary to Chickahominy River	Total Maximum Daily Load (TMDL) Development for the Unnamed Tributary to the Chickahominy River	Hanover	G05R	Total Phosphorus	409.35	LB/YR

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - UPPER JAMES RIVER BASIN RECOMMENDED SEGMENT CLASSIFICATION

Stream Name	Segment No.	Mile to Mile	Classification	Comments
Maury River	2-4	80.3-0.0	E.L.	Main & tributaries
James River	2-5	271.5-266.0	W.Q.	Main only
James River	2-6	266.0-115.0	E.L.	Main & tributaries except Tye & Rivanna River
Tye River	2-7	41.7-0.0	E.L.	Main & tributaries except Rutledge Creek
Rutledge Creek	2-8	3.0-0.0	W.Q.	Main only
Piney River	2-9	20.6-0.0	E.L.	Main & tributaries
Rivanna River	2-10	20.0-0.0	E.L.	Main & tributaries
Rivanna River	2-11	38.1-20.0	W.Q.	Main only
Rivanna River	2-12	76.7-38.1	E.L.	Main & tributaries
S.F. Rivanna River	2-13	12.2-0.0	E.L.	Main & tributaries
Mechum River	2-14	23.1-0.0	E.L.	Main & tributaries
N.F. Rivanna River	2-15	17.0-0.0	E.L.	Main & tributaries except Standardsville Run
Standardsville Run	2-16	1.2-0.0	W.Q.	Main only
Appomattox River	2-17	156.2-27.7	E.L.	Main & tributaries except Buffalo Creek, Courthouse Branch, and Deep Creek
Buffalo Creek	2-18	20.9-0.0	E.L.	Main & tributaries except Unnamed Tributary @ R.M. 9.3
Unnamed Tributary of Buffalo Creek @ R.M. 9.3	2-19	1.3-0.0	W.Q.	Main only
Courthouse Branch	2-20	0.6-0.0	W.Q.	Main only
Deep Creek	2-21	29.5-0.0	E.L.	Main & tributaries except Unnamed Tributary @ R.M. 25.0
Unnamed Tributary of Deep Creek @ R.M. 25.0	2-22	2.2-0.0	W.Q.	Main only

TABLE B2 - UPPER JAMES RIVER BASIN LOAD ALLOCATIONS BASED ON EXISTING DISCHARGE POINT7

Stream Name	Segment Number	Classification	Mile to Mile	Significant Discharges	Total Assimilative Capacity of Stream BOD5 lbs/day	Wasteload Allocation BOD5 lbs/day2	Reserve BOD5 lbs/day5
Cedar Creek	2-3	E.L.	1.9-0.0	Natural Bridge, Inc. STP	35.0	28.0	7.0 (20%)
Elk Creek	2-3	E.L.	2.8-0.0	Natural Bridge Camp for Boys STP	7.0	3.3	3.7 (53%)
Little Calfpasture River	2-4	E.L.	10.9-4.0	Craigsville	12.0	9.6	2.4 (20%)
Cabin River	2-4	E.L.	1.7-0.0	Millboro	Self -sustaining	None	None
Maury River	2-4	E.L.	19.6-12.2	Lexington STP	380.0	380.0	None
Maury River	2-4	E.L.	12.2-1.2	Georgia Bonded Fibers	760.0	102.03	238.0 (31%)
				Buena Vista STP		420.0	
Maury River	2-4	E.L.	1.2-0.0	Lees Carpets	790.0	425.03	290.0 (37%)
				Glasgow STP		75.0	
James River	2-5	W.Q.	271.5-266.0	Owens-Illinois	4,640.0	4,640.03	None
James River	2-6	E.L.	257.5-231.0	Lynchburg STP	10,100.0	8,000.0	2,060.0 (20%)
				Babcock & Wilcox- NNFD		40.03	
James River	2-6	E.L.	231.0-202.0	Virginia Fibre	3,500.0	3,500.0	None
Rutledge Creek	2-8	W.Q.	3.0-0.0	Amherst STP	46.0	37.0	9.0 (20%)
Town Creek	2-7	E.L.	2.1-0.0	Lovington STP	26.0	21.0	5.0 (20%)
Ivy Creek	2-6	E.L.	0.1-0.0	Schuyler	13.8	11.0	2.8 (20%)
James River	2-6	E.L.	186.0-179.0	Uniroyal, Inc.	1,400.0	19.36	1,336.0 (95%)
				Scottsville STP		45.0	
North Creek	2-6	E.L.	3.1-0.0	Fork Union STP	31.0	25.0	6.0 (20%)
Howells Branch and Licking Hole Creek	2-14	E.L.	0.7-0.0	Morton Frozen Foods	20.0	20.03	None
Standardsville Run	2-16	W.Q.	1.2-0.0	Standardsville STP	17.9	14.3	3.6 (20%)
Rivanna River	2-11	W.Q.	23.5-20.0	Lake Monticello STP	480.0	380.0	100.0 (20%)
Rivanna River	2-10	E.L.	15.0-0.0	Palmyra	250.0	4.0	158.0 (63%)

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				Schwarzenbach Huber		88.03	
Unnamed Tributary of Whispering Creek	2-6	E.L.	1.2-00	Dillwyn STP	38.0	30.0	8.0 (21%)
South Fork Appomattox River	2-17	E.L.	5.5-0.0	Appomattox Lagoon	18.8	15.0	3.8 (20%)
Unnamed Tributary of Buffalo Creek	2-19	W.Q.	1.3-0.0	Hampden-Sydney Coll. STP	10.0	8.0	2.0 (20%)
Appomattox River	2-17	E.L.	106.1-88.0	Farmville STP	280.0	220.0	60.0 (21%)
Unnamed Tributary of Little Guinea Creek	2-17	E.L.	2.5-1.3	Cumberland H.S. Lagoon	0.6	0.5	0.1 (20%)
Unnamed Tributary of Tear Wallet Creek	2-17	E.L.	0.68-0.0	Cumberland Courthouse	8.8	7.0	1.8 (20%)
Courthouse Branch	2-22	W.Q.	2.2-0.0	Amelia STP	21.0	17.0	4.0 (20%)
Unnamed Tributary of Deep Creek	2-22	W.Q.	2.2-0.0	Crewe STP	50.311,12	50.111,12	0.2 (0.4%)11,12, 13

1 Recommended classification.

2 Based on 2020 loads or stream assimilative capacity less 20%.

3 Load allocation based on published NPDES permits.

4 This assimilative capacity is based upon an ammonia loading no greater than 125.1 lbs/day.

5 Percentages refer to reserve as percent of total assimilative capacity. Minimum reserve for future growth and modeling accuracy is 20% unless otherwise noted.

6 No NPDES Permits published (BPT not established) allocation base on maximum value monitored.

7 This table is for the existing discharge point. The recommended plan may involve relocation or elimination of stream discharge.

8 Assimilative capacity will be determined upon completion of the ongoing study by Hydrosience, Inc.

9 Discharges into Karnes Creek, a tributary to the Jackson River.

10 Discharges into Wilson Creek, near its confluence with Jackson River.

11 Five-day Carbonaceous Biological Oxygen Demand (cBOD5).

12 Revision supersedes all subsequent Crewe STP stream capacity, allocation, and reserve references.

13 0.4 percent reserve: determined by SWCB Piedmont Regional Office.

Source: Wiley & Wilson, Inc.

TABLE B3 - UPPER JAMES RIVER BASIN ADDITIONAL LOAD ALLOCATIONS BASED ON RECOMMENDED DISCHARGE
 POINT

Stream Name	Segment Number	Classification ¹	Mile to Mile	Significant Discharges	Total Assimilative Capacity of Stream BOD ₅ lbs/day	Wasteload ² Allocation BOD ₅ lbs/day	Reserve ⁴ BOD ₅ lbs/day ⁵
Mill Creek	2-4	E.L.	5.5-0.0	Millboro	30.0	7.3	22.7 (76%)
Calfpasture River	2-4	E.L.	4.9-0.0	Goshen	65.0	12.0	53.0 (82%)
Maury River	2-4	E.L.	1.2-0.0	Lees Carpet	790.0	425.03	235.0 (30%)
				Glasgow Regional S.T.P.		130.0	
Buffalo River	2-7	E.L.	9.6-0.0	Amherst S.T.P.	150.0	120.0	30.0 (20%)
Rockfish River	2-6	E.L.	9.5-0.0	Schuyler S.T.P.	110.0	25.0	85.0 (77%)
Standardsville Run		E.L.		Standardsville	Land Application Recommended		
South Fork Appomattox River		E.L.		Appomattox Lagoon	Connect to Recommended Facility in Roanoke River Basin		
Buffalo Creek	2-17	E.L.	9.3-7.7	Hampden-Sydney College	46.0	23.0	23.0 (50%)
Unnamed trib. of Tear Wallet Creek		E.L.		Cumberland Courthouse	Land Application Recommended		
Courthouse Branch		E.L.		Amelia	Land Application Recommended		
Deep Creek	2-17	E.L.	25.0-12.8	Crewe S.T.P.	69.0	55.0	14.0 (20%)

¹Recommended classification.

²Based on 2020 loads or stream assimilative capacity less 20%.

³Load allocation based on published NPDES permit.

⁴Percentages refer to reserve as percent of total assimilative capacity. Minimum reserve for future growth and modeling accuracy is 20% unless otherwise noted.

5Assimilative capacity will be determined upon completion of the ongoing study by Hydrosience, Inc.

Source: Wiley & Wilson, Inc.

TABLE B4 - SEGMENT CLASSIFICATION UPPER JAMES-JACKSON RIVER SUBAREA

Stream Name	Segment Number	Mile to Mile	Stream Classification	Comments
Back Creek	2-1	16.06-8.46	W.Q.	Main Only
Jackson River	2-1	95.70-24.90	E.L.	Main and Tributaries
Jackson River	2-2	24.90-0.00	W.Q.	Main Only
Jackson River	2-2	24.90-0.00	E.L.	Tributaries Only
James River	2-3	349.50-308.50	E.L.	Main and Tributaries
James River	2-3	308.50-279.41	E.L.	Main and Tributaries

TABLE B5 - UPPER JAMES-JACKSON RIVER SUBAREA WASTELOAD ALLOCATIONS BASED ON EXISTING DISCHARGE
 POINT1

MAP LOCATION	STREAM NAME	SEGMENT NUMBER	SEGMENT CLASSIFICATION STANDARDS	MILE to2 MILE	DISCHARGER	VPDES PERMIT NUMBER	VPDES PERMIT LIMITS BOD5 kg/day	303(e)3 WASTELOAD ALLOCATION BOD5 kg/day
1	<i>Jackson River</i>	2-1	E.L.	93.05-	Virginia Trout	VA0071722	N/A	Secondary
B	<i>Warm Springs Run</i>	2-1	E.L.	3.62-0.00	Warm Springs STP	VA0028233	9.10	Secondary
3	Back Creek	2-1	W.Q.	16.06- 8.46	VEPCO	VA0053317	11.50	11.50
C	X-trib to Jackson River	2-1	E.L.	0.40-0.0	Bacova	VA0024091	9.10	Secondary
D	Hot Springs Run	2-1	E.L.	5.30-0.00	Hot Springs Reg. STP	VA0066303	51.10	Secondary

E	X-trib to Cascades Creek	2-1	E.L.	3.00-0.00	Ashwood- Healing Springs STP	VA0023726	11.30	Secondary
F	Jackson River	2-1	E.L.	50.36-	U.S. Forest Service Bolar Mountain	VA0032123	1.98	Secondary
G	Jackson River	2-1	E.L.	43.55	U.S. Army COE Morris Hill Complex	VA0032115	1.70	Secondary
H	Jackson River	2-1	E.L.	29.84-	Alleghany County Clearwater Park	VA0027955	5.70	Secondary
4	Jackson River	2-1	E.L.	25.99	Covington City Water Treatment Plant	VA0058491	N/A	Secondary
5	Jackson River	2-2	W.Q.	24.64- 19.03	Westvaco	VA0003646	4,195.00	4,195.004
6					Covington City 5 Asphalt Plant	VA0054411	N/A	N/A
7					Hercules, Inc 6	VA0003450	94.00	94.00
J	Jackson River	2-2	W.Q.	19.03- 10.5	Covington STP	VA0025542	341.00	341.00
K	Jackson River			10.5-0.0	Low Moor STP7	VA0027979	22.70	22.70
M					D.S. Lancaster CC8	VA0028509	3.60	3.60
L					Selma STP9	VA0028002	59.00	59.00
10					The Chessie System10	VA0003344	N/A	N/A
N					Clifton Forge STP11	VA0002984	227.00	227.00
11					Lydall12	VA0002984	6.00	6.00
P					Iron Gate STP13	VA0020541	60.00	60.00

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 CHESAPEAKE BAY WATERSHED AND 9 VAC 25-720 WATER
 QUALITY MANAGEMENT PLANNING REGULATION

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8	Paint Bank Branch	2-2	E.L.	1.52	VDGIF Paint Bank Hatchery	VA0098432	N/A	Secondary
I	Jerrys Run	2-2	E.L.	6.72-	VDOT 1-64 Rest Area	VA0023159	0.54	Secondary
AA	East Branch (Sulfer Spring)	2-2	E.L.	2.16	Norman F. Nicholas	VA0078403	0.05	Secondary
BB	East Branch (Sulfer Spring)	2-2	E.L.	1.91-	Daryl C. Clark	VA0067890	0.068	Secondary
9	Smith Creek	2-2	E.L.	3.44-	Clifton Forge Water Treatment Plant	VA0006076	N/A	Secondary
O	Wilson Creek	2-2	E.L.	0.20-0.0	Cliftdale14 Park STP	VA0027987	24.00	Secondary
2	Pheasanty Run	2-3	E.L.	0.01-	Coursey Springs	VA0006491	434.90	Secondary
Q	Grannys Creek	2-3	E.L.	1.20-	Craig Spring Conference Grounds	VA0027952	3.40	Secondary
CC	X-trib to Big Creek	2-3	E.L.	1.10-	Homer Kelly Residence	VA0074926	0.05	Secondary
12	Mill Creek	2-3	E.L.	0.16-	Columbia Gas Transmission Corp.	VA0004839	N/A	Secondary
R	John Creek	2-3	E.L.	0.20-	New Castle STP(old)	VA0024139	21.00	Secondary
S	Craig Creek	2-3	E.L.	48.45- 36.0	New Castle STP (new)	VA0064599	19.90	Secondary
T	Craig Creek	2-3	E.L.	46.98-	Craig County Schools McCleary E.S.	VA0027758	0.57	Secondary

DD	Eagle Rock Creek	2-3	E.L.	0.08-	Eagle Rock STP15 (Proposed)	VA0076350	2.30	Secondary
U	X-trib to Catawba Creek	2-3	E.L.	0.16	VDMH & R Catawba Hospital	VA0029475	13.60	Secondary
14	Catawba Creek	2-3	E.L.	23.84	Tarmac- Lonestar	VA0078393	0.80	Secondary
FF	Borden Creek	2-3	E.L.	2.00-	Shenandoah Baptist Church Camp	VA0075451	0.88	Secondary
EE	X-trib to Borden Creek	2-3	E.L.	0.36	David B. Pope	VA0076031	0.07	Secondary
V	X-trib to Catawba Creek	2-3	E.L.	3.21-	U.S. FHA Flatwood Acres	VA0068233	0.03	Secondary
W	Catawba Creek	2-3	E.L.	11.54-	Fincastle STP	VA0068233	8.50	Secondary
X	Looney Mill Creek	2-3	E.L.	1.83-	VDOT I-81 Rest Area	VA0023141	0.91	Secondary
Y	X-trib to Stoney	2-3	E.L.	0.57	VDOC Field Unit No. 25 Battle Creek	VA0023523	1.10	Secondary
Z	James River	2-3	E.L.	308.5- 286.0	Buchanan STP	VA0022225	27.00	Secondary

TABLE B5 - NOTES:

N/A Currently No BOD5 limits or wasteload have been imposed by the VPDES permit. Should BOD5 limits (wasteload) be imposed a WQMP amendment would be required for water quality limited segments only.

1 Secondary treatment levels are required in effluent limiting (E.L.) segments. In water quality limiting (W.Q.) segments quantities listed represent wasteload allocations.

2 Ending river miles have not been determined for some Effluent Limited segments.

3 These allocations represent current and original (1977 WQMP) modeling. Future revisions may be necessary based on Virginia State Water Control Board modeling.

4 The total assimilative capacity at critical stream flow for this portion of Segment 2-2 has been modeled and verified by Hydrosience, Inc. (March 1977) to be 4,914 kg/day BOD₅.

5 The discharge is to an unnamed tributary to the Jackson River at Jackson River mile 22.93.

6 The discharge is at Jackson River mile 19.22.

7 The discharge is to the mouth of Karnes Creek, a tributary to the Jackson River at Jackson River mile 5.44.

8 The discharge is at Jackson River mile 6.67.

9 The discharge is at Jackson River mile 5.14.

10 The discharge is at Jackson River mile 4.72.

11 The discharge is at Jackson River mile 3.46.

12 The discharge is at Jackson River mile 1.17

13 The discharge is at Jackson River mile 0.76

14 The discharge is to the mouth of Wilson Creek, a tributary to the Jackson River at Jackson River mile 2.44.

15 The discharge is to the mouth of Eagle Rock Creek, a tributary to the Jackson River at Jackson River mile 330.35.

TABLE B6 - RICHMOND CRATER INTERIM WATER QUALITY MANAGEMENT PLAN STREAM CLASSIFICATIONS - JAMES
RIVER BASIN

SEGMENT	SEGMENT NUMBER	MILE TO MILE	CLASSIFICATION
USGS HUC02080206 James River	2-19	115.0-60.5	W.Q.
USGS HUC02080207 Appomattox	2-23	30.1-0.0	W.Q.

TABLE B6- * Note: A new stream segment classification for the Upper James Basin was adopted in 1981. The SWCB will renumber or realign these segments in the future to reflect these changes. This Plan covers only a portion of these segments.

TABLE B7 - RICHMOND CRATER INTERIM WATER QUALITY MANAGEMENT PLAN– CURRENT PERMITTED WASTE
LOADS (March 1988)

	SUMMER (June-October)							WINTER (November-May)					
	FLOW	BOD5		NH3-N1		DO2		FLOW	BOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)		(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP3	45.00	3002	8.0	-	-	-		45.00	5367		-	-	-
E.I. DuPont-Spruance	8.68	936	-	-	-	-		8.68	936	-	-	-	-
Falling Creek STP	9.00	1202	16.0	-	-	5.9		9.00	2253	30.0	-	-	5.9
Proctor's Creek STP	6.40	1601	30.0	-	-	5.9		11.80	2952	30.0	-	-	5.9
Reynolds Metals Company	0.39	138	-	7	-	-		0.39	138	-	7	-	-
Henrico STP	30.00	3005	12.0	-	-	5.9		30.00	7260	29.0	-	-	5.9
American Tobacco Company	1.94	715	-	-	-	-		1.94	716	-	-	-	-
ICI Americas, Inc.	0.20	152	-	-	-	-		0.20	152	-	-	-	-
Phillip Morris- Park 500	1.50	559	-	-	-	-		1.50	557	-	-	-	-
Allied (Chesterfield)	51.00	1207	-	-	-	-		51.00	1207		-	-	-
Allied (Hopewell)	150.00	2500	-	-	-	-		150.00	2500	-	-	-	-
Hopewell Regional WTF	34.08	12507	44.0	-	-	4.8		34.08	12507	44.0	-	-	4.8
Petersburg STP	15.00	2804	22.4	-	-	5.0		15.00	2804	22.4	-	-	5.0
TOTAL	353.19	30328						358.59	39349				

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Richmond STP's BOD5 is permitted as CBOD5

TABLE B7 - WASTE LOAD ALLOCATIONS FOR THE YEAR 1990

	SUMMER (June-October)						WINTER (November-May)				
	FLOW	CBOD5		NH3-N1,3		DO2	CBOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.00	3002	8.0	2403	6.4	5.6	5367	14.3	5707	15.2	5.6
E.I. DuPont-Spruance	11.05	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	12.00	1602	16.0	961	9.6	5.9	2403	24.0	1402	14.0	5.9
Reynolds Metals Co.	0.49	172		8		6.5	172		8		6.5
Henrico STP	30.00	3002	12.0	2403	9.6	5.6	4756	19.0	3504	44.0	5.6
American Tobacco Co.	2.70	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.20	819		92		4.6	819		92		4.6
Allied (Chesterfield)	53.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	165.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	34.07	12502	44.0	12091	36.2	4.8	12502	44.0	10291	36.2	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	380.81	31084		28978			36679	35958			

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

TABLE B7- WASTE LOAD ALLOCATION FOR THE YEAR 2000

	SUMMER (June-October)						WINTER (November-May)				
	FLOW	CBOD5		NH3-N1,3		DO2	CBOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.08	3002	8.0	2403	6.4	5.6	5367	14.3		15.2	5.6
E.I. DuPont-Spruance	196.99	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	16.80	1602	11.4	961	6.9	5.9	2403	17.1	1402	10.0	5.9
Reynolds Metals Co.	0.78	172		13		6.5	172		13		6.5
Henrico STP	32.80	3002	11.0	2403	8.8	5.6	4756	17.4	3504	12.8	5.6
American Tobacco Co.	3.00	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.90	819		92		4.6	819		92		4.6
Allied (Chesterfield)	56.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	170.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	36.78	12502	40.7	12091	33.5	4.8	12502	40.7	10291	33.5	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	406.43	31084		28982			36679		35963		

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

TABLE B7- WASTE LOAD ALLOCATIONS FOR THE YEAR 2010

	SUMMER (June-October)						WINTER (November-May)				
	FLOW	CBOD5		NH3-N1,3		DO2	CBOD5		NH3-N1		DO2
	(mgd)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)	(lbs/d)	(mg/l)	(lbs/d)	(mg/l)	(mg/l)
City of Richmond STP	45.86	3002	7.8	2403	6.3	5.6	5367	14.0		14.9	5.6
E.I. DuPont-Spruance	16.99	948		590		4.4	948		756		2.9
Falling Creek STP	10.10	1348	16.0	539	6.4	5.9	2023	24.0	1281	15.2	5.9
Proctor's Creek STP	24.00	1602	8.0	961	4.8	5.9	2403	12.0	1402	7.0	5.9
Reynolds Metals Co.	0.78	172		13		6.5	172		13		6.5
Henrico STP	38.07	3002	9.5	2403	7.6	5.6	4756	15.0	3504	11.0	5.6
American Tobacco Co.	3.00	715		113		5.8	715		113		5.8
ICI Americas, Inc.	0.20	167		8		5.8	167		8		3.1
Phillip Morris- Park 500	2.90	819		92		4.6	819		92		4.6
Allied (Chesterfield)	56.00	1255		442		5.7	1255		442		5.7
Allied (Hopewell)	180.00	2750		10326		6.1	2750		10326		6.1
Hopewell Regional WTF	39.61	12502	37.8	10291	31.1	4.8	12502	37.8	10291	31.1	4.8
Petersburg STP	15.00	2802	22.4	801	6.4	5.0	2802	22.4	2028	16.2	5.0
TOTAL	432.1	31084		28982			36679		35963		

1 NH3-N values represent ammonia as nitrogen.

2 Dissolved oxygen limits represent average minimum allowable levels.

3 Allied (Hopewell) allocation may be redistributed to the Hopewell Regional WTF by VPDES permit.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[~~the associated delivery factors used for trading or offset purposes~~], and the total nitrogen and total phosphorus [~~delivered~~] waste load allocation[s] for the basin. [~~These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.~~]

280	H12R	Amherst Town - STP	VA0031321	6,000 <u>7,309</u>	0.61	3,700	550 <u>548</u>	1.10	600
280	H05R	BWX Technologies Inc	VA0003697	120,000 <u>187,000</u>	0.61	71,000	760 <u>1,523</u>	1.10	840
280	H05R	Greif Inc. - Riverville	VA0006408	65,000 <u>73,246</u>	0.61	40,000	31,000 <u>29,694</u>	1.10	34,000
280	H31R	Lake Monticello STP	VA0024945	17,000 <u>12,121</u>	0.61	10,000	1,100 <u>909</u>	1.10	1,200
280	H05R	Lynchburg City STP [(1)]	VA0024970	420,000 <u>536,019</u>	0.61	260,000	26,000 <u>33,501</u>	1.10	29,000
280	H28R	Moore's Creek Regional STP	VA0025518	290,000 <u>182,734</u>	0.61	180,000	18,000 <u>13,705</u>	1.10	20,000
290	H38R	Powhatan CC STP	VA0020699	7,700 <u>5,726</u>	0.81	6,200	480 <u>429</u>	1.10	530
300	J11R	Crewe WWTP	VA0020303	7,300 <u>6,091</u>	0.37	2,700	910 <u>457</u>	0.42	380
300	J01R	Farmville WWTP	VA0083135	27,000 <u>29,237</u>	0.37	9,900	3,400 <u>2,193</u>	0.42	1,400
600	G02E	Brown and Williamson	VA0002780	19,000 <u>25,583</u>	1.00	19,000	1,900 <u>1,919</u>	1.00	1,900
600	G01E	E I du Pont - Spruance	VA0004669	200,000 <u>201,080</u>	1.00	200,000	7,800 <u>7,816</u>	1.00	7,800
600	G01E	Falling Creek WWTP	VA0024996	140,000 <u>123,041</u>	1.00	140,000	14,000 <u>9,228</u>	1.00	14,000
600	G01E	Henrico County WWTP	VA0063690	780,000 <u>913,668</u>	1.00	780,000	78,000 <u>68,525</u>	1.00	78,000
600	G03E	Honeywell - Hopewell	VA0005291	1,100,000 <u>1,090,798</u>	1.00	1,100,000	52,000 <u>51,592</u>	1.00	52,000
600	G03R	Hopewell WWTP	VA0066630	1,200,000 <u>1,827,336</u>	1.00	1,200,000	53,000 <u>45,683</u>	1.00	53,000
600	G15E	HRSD - Boat Harbor STP	VA0081256	540,000 <u>609,112</u>	1.00	540,000	49,000 <u>76,139</u>	1.00	49,000
600	G11E	HRSD -	VA0081272	570,000 <u>487,290</u>	1.00	570,000	52,000 <u>60,911</u>	1.00	52,000

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		James River									
		STP									
600	G10E	HRSD - Williamsburg STP	VA0081302	500,000	<u>548,201</u>	1.00	500,000	46,000	<u>68,525</u>	1.00	46,000
600	G02E	Philip Morris - Park 500 [(2)]	VA0026557	40,000	<u>18,547</u>	1.00	40,000	7,400	<u>2,650</u>	1.00	7,400
600	G01E	Proctors Creek WWTP	VA0060194	290,000	<u>328,920</u>	1.00	290,000	29,000	<u>24,669</u>	1.00	29,000
600	G01E	Richmond WWTP [(1)]	VA0063177	1,000,000	<u>1,096,402</u>	1.00	1,000,000	73,000	<u>68,525</u>	1.00	73,000
	[G02E]	[Dominion-Chesterfield (3)]	[VA0004146]		<u>352,036</u>				<u>210</u>		
600	J15R	South Central WW Authority	VA0025437	210,000	<u>280,192</u>	1.00	210,000	21,000	<u>21,014</u>	1.00	21,000
610	G07R	Chickahominy WWTP	VA0088480	2,300	<u>4,934</u>	1.00	2,300	76	<u>123</u>	1.00	76
610	G05R	Tyson Foods - Glen Allen	VA0004031	21,000	<u>19,552</u>	1.00	21,000	430	<u>326</u>	1.00	430
620	G11E	HRSD - Nansemond STP	VA0081299	640,000	<u>730,934</u>	1.00	640,000	58,000	<u>91,367</u>	1.00	58,000
960	G15E	HRSD - Army Base STP	VA0081230	500,000	<u>438,561</u>	1.00	500,000	46,000	<u>54,820</u>	1.00	46,000
960	G15E	HRSD - VIP WWTP	VA0081281	1,100,000	<u>974,579</u>	1.00	1,100,000	97,000	<u>121,822</u>	1.00	97,000
960	G15E	JH Miles & Company	VA0003263	20,000	<u>158,826</u>	1.00	20,000	680	<u>18,654</u>	1.00	680
965]	C07E	HRSD - Ches.- Elizabeth STP	VA0081264	1,500,000	<u>1,526,409</u>	1.00]	1,500,000	110,000	<u>108,674</u>	1.00]	110,000

TOTALS	12,001,600 13,45	11,155,600]	1,148,596 1,205.	1,184,636]
	9,719]		957]	

[NOTES: (1) Waste load allocations for localities served by combined sewers are based on dry weather design flow capacity.

During wet weather flow events the discharge shall achieve a TN concentration of 8.0 mg/l and a TP concentration of 1.0 mg/l.

(2) TN waste load allocation based on the portion of discharged nitrogen that is bioavailable to aquatic life.

(3) Waste load allocations are "net" loads, based on the portion of the nutrient discharge introduced by the facility's process waste streams, and not originating in raw water intake.]

9 VAC 25-720-70. Rappahannock River Basin.

A. Total maximum Daily Load (TMDLs).

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

9 VAC 25-720-70 Rappahannock Area Development Commission (RADCO) 208 Area Wide Waste Treatment Management Plan And Potomac-Shenandoah River Basin 303(e) Water Quality Management Plan is included in The Potomac River Basin section.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, the associated delivery factors used for trading or offset purposes], and the total nitrogen and total phosphorus [delivered-] waste load allocation[s] for the basin. [These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.]

STATE WATER CONTROL BOARD
9 VAC 25-40 POLICY FOR NUTRIENT ENRICHED
WATERS AND DISCHARGERS WITHIN THE
CHESAPEAKE BAY WATERSHED AND 9 VAC 25-720 WATER
QUALITY MANAGEMENT PLANNING REGULATION

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[CBP	Virginia	Discharger	VPDES	Total	Nitrogen	[TN	[TN	Total	[TP	TP
Watershed	Waterbody ID	Name	Permit No.	(TN)	Waste	Delivery	Waste	Phosphorus	Delivery	Waste
Model				Load	Allocation	Factor	Load	(TP) Waste	Factor	Load
Segment				(lbs/yr)			Delivered	Load		Delivered
							Allocation	Allocation		Allocation
							(lbs/yr)	(lbs/yr)		(lbs/yr)
230	E09R	Culpeper	VA0061590	[55,000	<u>54,820</u>	0.61	33,000	<u>[4,100</u>	4.03	<u>4,200</u>
		WWTP [(1)]								
230	E02R	Marshall	VA0031763	7,800	<u>7,797</u>	0.61	4,800	<u>580</u>	4.03	<u>600</u>
		WWTP								
	[E09R]	[Mountain Run	[VA0090212]		<u>18,273</u>			<u>1,371</u>		
		STP]								
230	E13R	Orange STP	VA0021385	18,000	<u>36,547</u>	0.61	11,000	<u>1,400</u>	4.03	<u>1,400</u>
230	E11R	Rapidan STP	VA0090948	7,300	<u>7,309</u>	0.61	4,400	<u>550</u>	4.03	<u>560</u>
230	E02R	Remington	VA0076805	24,000	<u>24,364</u>	0.61	15,000	<u>1,800</u>	4.03	<u>1,900</u>
		WWTP								
230	E02R	[South Wales	VA0080527	11,000	<u>7,309</u>	0.61	6,700	<u>820</u>	4.03	<u>850</u>
		Utility								
		Clevengers								
		Corner] STP								
230	E02R	Warrenton	VA0021172	30,000	<u>30,456</u>	0.61	18,000	<u>2,300</u>	4.03	<u>2,400</u>
		Town STP								
230	E18R	Wilderness	VA0083411	9,100	<u>15,228</u>	0.61	5,600	<u>680</u>	4.03	<u>710</u>
		WWTP								
560	E20E	FMC WWTF	VA0068110	66,000	<u>65,784</u>	1.00	66,000	<u>4,900</u>	4.00	<u>4,900</u>
560	E20E	Fredericksbur	VA0025127	43,000	<u>42,638</u>	1.00	43,000	<u>3,200</u>	4.00	<u>3,200</u>
		g WWTF								
560	E21E	Haymount	VA0089125	12,000	<u>7,066</u>	1.00	12,000	<u>870</u>	4.00	<u>870</u>
		WWTF								
560	E24E	Haynesville	VA0023469	2,800	<u>2,802</u>	1.00	2,800	<u>210</u>	4.00	<u>210</u>
		CC WWTP								
	[E21E]	[Hopyard	[VA0089338]		<u>6,091</u>			<u>457</u>		

<u>Farms STP]</u>									
560	E20E	Little Falls Run	VA0076392	97,000 <u>97,458</u>	1.00	97,000	7,300 <u>7,309</u>	1.00	7,300
		WWTF							
560	E20E	Massaponax	VA0025658	97,000 <u>97,458</u>	1.00	97,000	7,300 <u>7,309</u>	1.00	7,300
		WWTF							
560	E23R	Montross	VA0072729	1,200 <u>1,218</u>	1.00	1,200	91 <u>91</u>	1.00	91
		Westmoreland							
		WWTP							
	<u>[E21E]</u>	<u>[Oakland Park</u>	<u>[VA0086789]</u>	<u>1,706</u>			<u>128</u>		
<u>STP]</u>									
560	E23E	Tappahannock	VA0071471	9,700 <u>9,746</u>	1.00	9,700	730 <u>731</u>	1.00	730
		WWTP							
560	E26E	Urbanna	VA0026263	1,200 <u>1,218</u>	1.00	1,200	91 <u>91</u>	1.00	91
		WWTP							
560	E21R	US Army - Ft.	VA0032034	6,400 <u>6,457</u>	1.00	6,400	480 <u>484</u>	1.00	480
		A P Hill							
		WWTP							
560	E23E	Warsaw	VA0026891	3,600 <u>3,655</u>	1.00	3,600	270 <u>274</u>	1.00	270
		Aerated							
		Lagoons							
580	C01E	Omega	VA0003867	16,000 <u>21,213</u>	1.00	16,000	1,200 <u>1,591</u>	1.00	1,200
		Protein -							
		Reedville							
580	C01E	Reedville	VA0060712	2,400 <u>2,436</u>	1.00	2,400	180 <u>183</u>	1.00	180
		Sanitary							
		District							
930]	C01E	Kilmarnock	VA0020788	6,100 <u>6,091</u>	1.00]	6,100	460 <u>457</u>	1.00]	460
		WTP							
		TOTALS:		526,600 <u>575,140]</u>		462,900]	39,512 <u>43,135]</u>		39,902]

[NOTE: (1) Town of Culpeper WWTP waste load allocations (WLAs) based on a design flow capacity of 4.5 million gallons per day (MGD). If plant is not certified to operate at 4.5 MGD design flow capacity by 12/31/10, the WLAs will decrease to TN = 36,547 lbs/yr; TP = 2,741 lbs/yr, based on a design flow capacity of 3.0 MGD.]

9 VAC 25-720-110. Chesapeake Bay - Small Coastal - Eastern Shore River Basin.

A. Total maximum Daily Load (TMDLs).

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

Small Coastal and Chesapeake Bay-

TABLE B1 - CURRENT STREAM SEGMENT CLASSIFICATION

Segment No.	Name	Current State [Class]
7-12A	Pocomoke Sound	EL
7-12B	Messongo Creek	EL
7-12C	Beasley Bay	EL
7-12D	Chesconessex Creek	EL
7-13	Onancock Creek	WQ
7-14	Pungoteague	WQ
7-12E	Nandua Creek	EL
7-15	Occohannock Creek	WQ
7-12F	Nassawadox Creek	EL
7-12G	Hungars Creek	EL
7-12H	Cherrystone Inlet	EL
7-12I	South Bay	EL
7-12J	Tangier Island	_____
7-11A	Chincoteague	EL
7-11B	Hog Bogue	EL

7-11C	Metomkim Bay	EL
7-11D	Machipongo River	EL
7-11E	South Ocean	EL

Small Coastal and Chesapeake Bay

TABLE B2 - EASTERN SHORE WASTELOAD ALLOCATIONS

		INTERIM WASTELOAD ALLOCATIONS ⁽¹⁾			FINAL WASTELOAD ALLOCATIONS		
		(Current Permit Limits)					
NAME	RECEIVING STREAM OR ESTUARY	BOD ₅ (lb/d)	SUSPENDED SOLIDS (lb/d)	OIL & GREASE (lb/d)	BOD ₅ (lb/d)	SUSPENDED SOLIDS (lb/d)	OIL & GREASE (lb/d)
Commonwealth of Va. Rest Area	Pitts Cr.	4.3	4.3	--	4.3	4.3	--
Edgewood Park	Bullbegger Cr.	0.80	0.80	--	0.80	0.80	--
Holly Farms	Sandy Bottom Cr.	167(3)	167(3)	10 mg/l	Stream survey/model and determination of final wasteload allocations planned for the summer of 1980.		
Taylor Packing Company	Messongo Cr.	7006(3)	13010(3)	--	Stream survey/model was run previously. No change in permit anticipated.		
No. Accomack E.S.	Messongo Cr.	1.8	1.4	--	1.8	1.4	--
Messick & Wessels Nelsonia	Muddy Cr.	30mg/l ⁽⁴⁾	30mg/l ⁽⁴⁾	--	Interim wasteload allocations may be changed based on BAT guidance.		
Whispering Pines Motel	Deep Cr.	4.8	4.8	--	4.8	4.8	--

Town of Onancock	Onancock Cr.	21	21	--	21	21	--
Messick & Wessels	Onancock Cr.	30mg/l ⁽⁴⁾	30mg/l ⁽⁴⁾	--	Interim wasteload allocations may be changed based on guidance.		
So. Accomack E.S.	Pungoteague Cr.	1.8	1.4	--	1.8	1.4	--
A & P Exmore	Nassawadox Cr.	0.38	0.38	--	0.38	0.38	--
Norstrom Coin Laundry	Nassawadox Cr.	60mg/l ⁽⁴⁾ max.	60mg/l ⁽⁴⁾ max.	--	Interim wasteload allocation may be changed based on BAT guidance.		
NH-Acc. Memorial Hospital	Warehouse Cr.	12.5	12.5	--	21.5	12.5	--
Machipongo E.S. & H.H. Jr. High	Trib. To Oresbus Cr.	5.2	5.2	--	5.2	5.2	--
Town of Cape Charles	Cape Charles Harbor	62.6	62.6	--	62.6	62.6	--
America House	Chesapeake Bay	5	5	--	5	5	--
U.S. Coast Guard Chesapeake Bay	Chesapeake Bay	--	--	10/mg/l ⁽⁵⁾	--	--	10/mg/l ⁽⁵⁾
U.S. Government Cape Charles AFB	Magothy Bay	Currently No Discharge					
Exmore Foods (Process Water)	Trib. To Parting Cr.	200	100	--	Stream survey/model and determination of final wasteload allocations planned for the summer of 1980.		
Exmore Foods (Sanitary)	Trib. To Parting Cr.	30mg/l ⁽⁵⁾	30mg/l ⁽⁵⁾	--	30mg/l ⁽⁵⁾	30mg/l ⁽⁵⁾	--

Perdue Foods (process water)	Parker Cr.	May-Oct 275 367 Nov-Apr. 612 797	--	--	Interim Permit in process. Stream survey/models were run. No substantial change in permit anticipated.		
Perdue Foods (parking lot)	Parker Cr.	30mg/l(5)	30mg/l(5)	--	30mg/l(5)	30mg/l(5)	--
Accomack Nursing Home	Parker Cr.	2.7	2.6	--	2.7	2.6	--
U.S. Gov't NASA Wallops Island	Mosquito Cr.	75	75	--	75	75	--
U.S. Gov't NASA Wallops Island	Cat Cr.	1.25	1.25	--	1.25	1.25	--
F & G Laundromat	Chincoteague Channel	10	4.8	--	Interim wasteload allocations may be changed based on BAT guidance.		
U.S. Coast Guard	Chincoteague Channel	--	--	15mg/l (max.)	--	--	15mg/l (max.)
Virginia-Carolina Seafood	Chincoteague Bay	342	264	5.5	342	264	5.5
Reginald Stubbs Seafood Co. (VA0005813)	Assateague Channel	--	20	95	--	20	95
Reginald Stubbs Seafood Co. (VA00056421)	Assateague Channel	--	20 ^[1]	98	--	20.4 ⁽²⁾	98
Shreaves	Chincoteague Bay	--	16 ⁽²⁾	1.4 ⁽²⁾	--	16 ⁽²⁾	1.4 ⁽²⁾

Chincoteague Seafood	Chincoteague Bay	342	264	5.5	342	264	5.5
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TABLE B3 - EXISTING OR POTENTIAL SOURCES OF WATER POLLUTION

Location No.	Name	Receiving Estuary	Stream	Flow (MGD)	CBOD (mg/l/#D)	NBOD (mg/l/#D)	Total Suspended Solids (mg/l/#D)	D.O. (mg/l)	FC (MPN/100ml)	Treatment/Operation
1	Comm. Va. Rest Area	Pocomoke Sound	Pitts Cr.	.003	7/0.18		10/0.3	7.5	1	Extended aeration. Sec. Holding pond, CL ₂
2	H.E. Kelley	Pocomoke Sound	Pitts Cr.							Currently no discharges. Out of business
3	Edgewood Park	Pocomoke Sound	Bullbegger Creek	.006 ⁽³⁾	16/0.8 ⁽²⁾		16/0.8 ⁽²⁾			PRI, CL ₂ . Holding Pond
4	Holly Farms	Pocomoke Sound	Sand Bottom Creek	0.18	6/40		15/100	8.0	100	Aerated Lagoons, CL ₂
5	J.W. Taylor	Messongo Creek	Trib. To Messongo	.001	60/50		150/125	8.0		Aerated Lagoons
6	No. Accomack E.S.	Messongo Creek	Trib. To Messongo	.005	22/0.9		30/1.3	9.0		Sec., Septic Tank, Sand Filter Holding Pond

7	Messick & Wessells-Nelsonia	Beasly Bay	Muddy Creek	.005	125/5.2		100/4.2			Sec., Extended Aeration
8	Willets Laundromat	Beasly Bay	Hunting Creek							Prl., Septic Tank
9	Byrd Food	Beasly Bay								No discharge industry
10	Whispering Pines Motel	Beasly Bay	Deep Creek	.009	25/1.9		30/2.3	6.0		Sec., Extended Aeration Holding Pond, CL ₂
11	Town of Onancock	Onancock Creek	North Fork	.19	2/3.2		3/ 4.8	7.5	3	Primary, Primary Settling Sludge Digestion, CL ₂
12	Messick & Wessells-Onley	Onancock Creek	Joynes Branch	.005	100/4.2		150/6.3			Sec., Extended Aeration
13	So. Accomack E.S.	Pungoteague	Trib. To Pungoteague		24/1.8 ⁽²⁾		19/1.4 ⁽²⁾			Sec., Septic Tank, Grease Trap, Sand Filter, Holding Pond. No discharge in 4 yrs.

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14	Great Atlantic & Pacific Tea Company	Nassawado x	Nassawado x	.001	140/1.2		150/1.3		6.5	Sec., Extended Aeration CL ₂
15	Norstrom Coin Laundry	Nassawado x	Trib. To Nassawado x	.008						Sec., Extended Aeration, permit in process
17	N.H.-Acc. Memorial Hospital	Nassawado x	Warehouse Creek	.03	25/1.6		35/2.2	6.5	750	Secondary Aerated Lagoon, CL ₂ Holding pond Stab-Lagoon
18	Machipongo E.S. & N.H. Jr. High School	Hungars Creek	Trib. To Oresbus	.03 ⁽¹⁾	30/5.2 ⁽²⁾		30/5.2 ⁽²⁾			Sec., Stab-Lagoon, Holding Pond no discharge in 4 yrs.
19	B & B Laundromat	Cherry Stone Inlet	Old Castle Creek							Prl. Septic Tank w/discharger
20	KMC Foods, Inc.	Cherry Stone Inlet								No-Discharge industry
21	Herbert West Laundromat	Cherry Stone Inlet	Kings Creek							Prl. Septic Tank w/Discharger

22	Town of Cape Charles	Cape Charles Harbor	Cape Charles Harbor	.165 ⁽²⁾	290/400 ⁽³⁾		139/192 ⁽³⁾			Raw Sewage, Sewage Treatment to be completed by 1982
23	American House Inn	Chesapeake Bay	Chesapeake Bay		30/5 ⁽²⁾		30/5 ⁽²⁾			
24	U.S. Coast Guard	Chesapeake Bay	Chesapeake Bay	.001 ⁽²⁾	30/			5.0 ⁽²⁾	200 ⁽²⁾	Bilgewater
25	U.S. Gov't Cape Charles AFS	Magothy	Magothy	.001 ⁽²⁾				5.0 ⁽³⁾		Sec., CL ₂ , Aerated Lagoon, currently no-discharge
27	Exmore Frozen Foods	Machipongo	Trib. To Parting Cr.	.56	29/135		18/84	6.5		Grass Bays, Screening
28	Exmore Foods (Domestic)	Machipongo	Trib. To Parting Cr.	.02	5/0.8		9/1.5			Septic Tank, Sand Filter
30	Perdue Foods	Metomkin Bay	Parker Creek	1.7	11/156		15/213	6.5	150	Sec., Aerated Lagoon, Holding Pond, CL ₂
31	Perdue Foods	Metomkin Bay	Parker Cr.	.01 ⁽⁴⁾			15/1.3			

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32	Accomack Co. Nursing Home	Metomkin Bay	Parker Cr. North Fork	.011	20/1.8		28/2.6	6.5	100	Sec., Extended Aeration, Holding Pond, CL ₂
33	U.S. Gov't NASA (Wallops Island)	Hog Creek	Cat Creek	.005	30/		30/			Sec., Stab., Pond, Holding Pond, CL ₂
34	Robo Automatic Car	Chincoteagu e Channel	Little Simoneaton							
35	U.S. Gov't NASA	Chincoteagu e Channel	Mosquito Creek	.105	10.6/9.3(3)	112/28	2.0/1.8			Sec., Trickling Filter
36	Trail's End Rec. Vehicle Dev.	Chincoteagu e Channel	Trib to Mosquito Cr.							Septic Tank and Drainfield
37	Coin-Op Laundromat	Chincoteagu e Channel	Chincoteagu e Channel							No discharge
38	F & G Laundromat	Chincoteagu e Channel	Chincoteagu e Channel	.005						
39	U.S. Coast Guard	Chincoteagu e Channel	Chincoteagu e Channel	.001 ⁽²⁾			30/0.2 ⁽²⁾		200 ⁽²⁾	Discharge- Bilgewater
40	Phillip Custis	Ramshorn Bay								Spray Irrigation, no Discharge

[illegible]

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[illegible]

63	Wm. C. Bunting	Chincoteague		.001 ⁽⁴⁾	12		4.8			Oyster
64	Carpenters Seafood	Chincoteague		.001 ⁽⁴⁾	4.1`		2.1			Oyster
64a	Burtens Seafood, Inc.	Chincoteague		.006 ⁽⁴⁾	10.3		.35			Oyster shell stock deal no discharge
69	Jones Bros. Seafood	Chincoteague	Sheepshead Cr.							Oyster & Clams
70	W.E. Jones Seafood	Chincoteague	Sheepshead Creek				46.4 ⁽²⁾			Oyster & Clams
71	Conner & McGee Seafood	Chincoteague	Sheepshead Creek							Oyster & Clams (6) 1
72	Hills Oyster Farm	Chincoteague								Oyster & Clams (5)
73	Thomas E. Reed Seafood	Chincoteague	Deep Hole Creek							Oyster & Clams (6)
74	Mears & Powell	Metomkin								Oyster-Building, also used to clean fish ⁽⁵⁾
75	Wachapreague Seafood Company	Metomkin	Finney Creek	.036 ⁽⁴⁾			144			Sea Clam

76	George D. Spence and Son	Machipongo								Crab Shedding ⁽⁶⁾
77	George D. Spence and Son	Machipongo								Crab Picking, no discharge
78	George T. Bell	Machipongo								No Discharge, Oyster
79	George D. Spence and Son	Machipongo	Upshur Bay							Oyster ⁽⁶⁾
80	Peters Seafood	Machipongo								Oyster ⁽⁶⁾
81	J.E. Hamblin	Machipongo								Oyster, No discharge
83	Nathan Bell Seafood	Machipongo								Clams, Hard ⁽⁵⁾
84	John L. Marshall Seafood	Machipongo								Clams ⁽⁵⁾
85	American Original Foods, Inc.	Machipongo	Parting Creek	.151 ⁽⁴⁾	2632		1337			

86	Harvey & Robert Bowen	Machipongo	Parting Creek	.0006 ⁽⁴⁾	6.2		1.7			Oyster
87	H.M. Terry	Machipongo	Parting Creek	.0004 ⁽⁴⁾	3.3		.62			Oyster
89	Webb's Island Seafood	South Ocean Area								Clams ⁽⁶⁾
90	Cliff's Seafood	South Ocean Area	Mockhorn Bay							Oyster & Clam ⁽⁶⁾
92	H. Allen Smith	South Ocean Area		.037 ⁽⁴⁾	213		522			Sea Clam
94	C & D Seafood, Inc.	South Ocean Area	Oyster Harbor	.04 ⁽⁴⁾	427		204 sea clam 34 ⁽²⁾ oyster			Sea Clam, Oyster
95	B.L. Bell & Sons	South Ocean Area	Oyster Harbor	.001 ⁽⁴⁾	12		.9			Oyster
98	Lance Fisher Seafood Co.	Pocomoke		.02 ⁽⁴⁾	38		12.8			Oyster and Clam
99	Fisher & Williams/Le ster Fisher	Messongo								Building used to shed soft crabs ⁽⁵⁾

100	Grady Rhodes Seafood	Messongo								Sold business, Building used to shed soft crabs ⁽⁵⁾
101	Bonowell Bros.	Messongo	Pocomoke Sound	.001 ⁽⁴⁾	12		2.5			Oyster
102	John H. Lewis & Co.	Messongo	Starling Creek							Oyster SS only, no discharge
103	Eastern Shore Seafood	Beasly								Crab, no discharge
106	Ashton's Seafood, Inc.	Pungoteagu e								Shell stock dealer-no discharge
107	Nandua Seafood Co.	Nandua		.0001 ⁽⁴⁾)	.2		.9			Crab
108	A.M. Acuff	Cherrystone								Building used for storage, no discharge
110	D.L. Edgerton Co.	Cherrystone	Mud Creek							Conch. In operation. Retort drains overboard & fish wash- down ⁽⁶⁾

111 & 112	Tangier Island Seafood, Inc.	Tangier								Crab ⁽⁵⁾
113	Tangier	Chesapeake Bay								1000 KW Power Station
114	Chincoteague	Chincoteague Channel								2100 KW Power Station
115	Parksley									2400 KW Power Station
116	Tasley									1400 KW Power Station
117	Bayview									10,000 KW Power Station
118	Cape Charles	Cape Charles Harbor								1200 KW Power Station
119	Burdick Well & Pump Company									Holding Pond, no discharge
120	Marshall & Son Crab Company	Messongo Cr.								Crab Shedding ⁽⁶⁾
[]	Linton & Lewis Crab Co.	Pocomoke Sound								Crab Shedding ⁽⁶⁾

132	Mason Seafood Co.	Chincoteagu e Channel		.002 ⁽⁴⁾	7.7		13.7			Oysters
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NOTE: ⁽¹⁾ Water quality data taken from Discharge Monitoring Reports or special studies unless indicated.

⁽²⁾ NPDES Permit limits given since the permit is new and discharge monitoring reports not yet available.

⁽³⁾ Data from Accomack-Northampton Co. Water Quality Management Plan.

⁽⁴⁾ Estimated.

⁽⁵⁾ May need a permit--either company has not responded to SWCB letter or operation has just started up.

⁽⁶⁾ No limits -- has an NPDES permit, but is not required to monitor.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, ~~the associated delivery factors used for trading or offset purposes~~], and the total nitrogen and total phosphorus [~~delivered~~] waste load allocation[s] for the basin. [~~These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.~~]

[CBP	Virginia	Discharger	VPDES	Total Nitrogen	[TN	[TN	Total	[TP	TP Waste		
Watershed	Waterbody	Name	Permit No.	(TN)	Waste	Delivery	Waste	Phosphorus	Delivery	Load	
Model	ID			Load		Factor	Load	(TP)	Waste	Factor	Delivered
Segment				Allocation			Delivered	Load			Allocation
				(lbs/yr)			Allocation	Allocation			(lbs/yr)
						(lbs/yr)	(lbs/yr)				
440	C16E	Cape Charles	VA0021288	[6,100] <u>6,091</u>		1.00	6,100	[460] <u>457</u>	1.00		460
		Town WWTP									
440	C11E	Onancock	VA0021253	3,000] <u>3,046</u>		1.00	3,000	230] <u>228</u>	1.00		230

		WWTP							
440	C13E	Shore Memorial	VA0027537	1,200 1,218	1.00	1,200	9191	1.00	91
		Hospital							
440	C10E	Tangier WWTP	VA0067423	1,200 1,218	1.00	1,200	9191	1.00	91
440]	C10R	Tyson Foods -	VA0004049	20,000 22,842	1.00]	20,000	9801,142	1.00]	980
		Temperanceville							
		TOTALS:		31,500 34,415]		31,500]	1,8522,010]		1,852]

9 VAC 25-720-120. York River Basin.

A. Total Maximum Daily Load (TMDLs).

B. Stream segment classifications, effluent limitations including water quality based effluent limitations, and waste load allocations.

TABLE B1 - RECOMMENDED STREAM SEGMENTS IN THE YORK RIVER BASIN

Segment Number	Classification	Name of River (Description)*
8-1	EL	North Anna River (main and tributaries except Goldmine Creek and Contrary Creek) R.M. 68.4-0.0
8-2	EL	Goldmine Creek
8-3	WQ	Contrary Creek (main only) R.M. 9.5-0.0
8-4	EL	South Anna River (main and tributaries) R.M. 101.2-97.1

8-5	EL	South Anna River (main only) R.M. 97.1-77.4
8-6	EL	South Anna River (main and tributaries) R.M.77.4-0.0
8-7	EL	Pamunkey River (main and tributaries) R.M. 90.7-12.2
8-8	WQ	Pamunkey River (main only) R.M. 12.2-0.0
8-9	EL	Mattaponi River (main and tributaries) R.M.102.2-10.2
8-10	EL	Mattaponi River (main only) R.M.10.2-0.0
8-11	WQ	York River (main only) R.M. 30.4-22.4
8-12	EL	York River (main and tributaries except King Creek and Carter Creek) – R.M. 22.4-0.0
8-13	EL	Carter Creek (main and tributaries) R.M. 5.4-2.0
8-14	EL	Carter Creek (main only) R.M. 2.0-0.0
8-15	EL	King Creek (main only) R.M.5.6-0.0
8-16	WQ	Condemned shellfish areas- Timberneck, Queens, and Sarah Creeks and portions of the main stream of the York River.

*R.M.= River Mile, measured from the river mouth

Source: Roy F. Western

TABLE B2 - WASTE LOAD ALLOCATIONS (IN LBS PER DAY)

POINT SOURCE	1977 WASTE LOAD ²		MAXIMUM ⁷ DAILY LOAD		RECOMMENDED ALLOCATION			RAW WASTE LOAD AT 1995		REQUIRED & REMOVAL EFFICENCY 1995	
	CBO D ₅	UBO D ¹	CBO D ₅	UBO D	CBO D ₅	UBO D	PERCE NT RESER VE	CBO D ₅	UB OD	CBO D ₅	UB OD
Gordonsville	145	398	150	412	150	412	0	1950	2730	92	85
Louisa-Mineral	50	108	55	118	55	118	0	850	1150	93	90
Doswell	52	110	862 ⁸	1407 ⁸	690 ⁸	1125 ⁸	20	1080	1444	85(4)	71
Thornburg	63	150	68	162	68	162	0	1240	1690	94	90
Bowling Green	27	64	29	68	29	68	0	680	926	96	93
Ashland	160	303	235	559	188	447	20	2250	3825	92	88

Hanover (Regional STP)	170	437	280	820	280	820	0	5730	7930	96	90
Chesapeake Corp.	6400	8000	1044 5 ⁵	1500 0 ⁵	1044 5 ⁵	1500 0 ⁵	N/A	5170 0	6463 0	90	90
West Point	105	380	281 ³	1020	225	814	20	1000	1600	85 ⁴	66

¹BOD is Ultimate Biochemical Oxygen Demand. Its concentration is derived by the following: $BOD_5 / 0.80 + 4.5(TKN) = (UBOD)$. NOTE: The amount of TKN utilized depends on the location in the basin.

²Projected for 1977 based on population projections.

³Recommended allocation based on BPCTCA effluent guidelines applied to raw waste loads at 2020.

⁴Minimum removal efficiency.

⁵Allocation based on BPCTCA effluent guidelines; amended by Minute 25, June 3-5, 1979 board meeting.

⁶Based on assumed influent characteristics.

⁷Assimilative capacity.

⁸Amended by Minute 1, August 17, 1978, board meeting.

Source: Roy F. Weston, Inc.

C. Nitrogen and phosphorus waste load allocations to restore the Chesapeake Bay and its tidal rivers.

*The following table presents nitrogen and phosphorus waste load allocations for the identified significant dischargers[, ~~the~~
~~associated delivery factors used for trading or offset purposes~~], and the total nitrogen and total phosphorus [~~delivered~~] waste*

STATE WATER CONTROL BOARD
9 VAC 25-40 POLICY FOR NUTRIENT ENRICHED
WATERS AND DISCHARGERS WITHIN THE
CHESAPEAKE BAY WATERSHED AND 9 VAC 25-720 WATER
QUALITY MANAGEMENT PLANNING REGULATION

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~~load allocation[s] for the basin. [These individual significant discharger waste load allocations may be revised through the watershed trading program contained in 9 VAC 25-720-30. The waste load allocation listed below for a discharger, or the waste load allocation revised in accordance with 9 VAC 25-720-30, shall be achieved within four years following reissuance or modification of the discharger's VPDES permit, but in no case later than December 31, 2010.]~~

[CBP	Virginia	Discharger	VPDES	Total Nitrogen (TN)	[TN	TN—Waste	Total	[TP	TP
Watershe	Waterbod	Name	Permit No.	Waste	Load	Deliv	Phosphorus	Deliv	Waste
d	y ID			Allocation (lbs/yr)		ery	(TP)	ery	Load
Model						Facto	Load Allocation	Facto	Delivered
Segment						r	(lbs/yr)	r	Allocatio
							(lbs/yr)		n (lbs/yr)
240	F20R	Caroline	VA0073504	[7,300	<u>6,091</u>	0.42	3,100	[460	<u>457</u>
		County STP						0.43	200
250	F01R	Gordonsville	VA0021105	16,000	<u>11,451</u>	0.02	330	1,000	<u>859</u>
		STP						0.58	590
260	F04R	Ashland	VA0024899	38,000	<u>24,364</u>	0.51	19,000	2,400	<u>1,827</u>
		WWTP						0.58	1,400
260	F09R	Doswell	VA0029521	110,000	<u>59,510</u>	0.51	56,000	6,800	<u>20,101</u>
		WWTP						0.58	4,000
590	F27E	Giant	VA0003018	170,000	<u>167,128</u>	1.00	170,000	22,000	<u>22,111</u>
		Yorktown						1.00	22,000
		Refinery							
590	F27E	HRSD - York	VA0081311	310,000	<u>82,734</u>	1.00	310,000	19,000	<u>13,705</u>
		River STP						1.00	19,000
590	F14R	Parham	VA0088331	5,200	<u>36,547</u>	1.00	5,200	520	<u>2,741</u>
		Landing						1.00	520
		WWTP							
590	F14E	Smurfit	VA0003115	300,000	<u>259,177</u>	1.00	300,000	28,000	<u>70,048</u>
		Stone -						1.00	28,000
		West Point							
590	F12E	Totopotomo	VA0089915	120,000	<u>60,911</u>	1.00	120,000	7,600	<u>4,568</u>
		y WWTP						1.00	7,600

590	F25E	West Point	VA0075434	15,000 <u>7,309</u>	1.00	15,000	910 <u>548</u>	1.00	910
		STP							
940]	C04E	HRSD	VA0028819	1,900 <u>1,218</u>	1.00]	1,900	120 <u>91</u>	1.00]	120
		Mathews							
		Courthouse							
		STP							
		TOTALS:		1,093,400 <u>816,442]</u>		1,000,530]	88,810 <u>137,057]</u>		84,340]